

SCRIBNER'S MONTHLY.

VOL. XVIII.

JULY, 1879.

No. 3.

THE AMERICAN ON THE STAGE.



MR. JOHN E. OWENS AS "SOLON SHINGLE."

IF we cast a rapid glance over the stage of the United States, seeking to see what class of drama succeeds best and lasts longest, it is soon evident that a piece in which the most prominent feature is the exhibition of an American type has the greatest chance of gaining popular approval. It may be the American of fact, as our Southern friend, *Colonel Mulberry Sellers*, or his Eastern relative, *Judge Bardwell Slote*, or it may be the

American of legend, as the immortal *Rip Van Winkle* of our own Hudson, or the stalwart *Davy Crockett* of the West,—for although Crockett was once an actual entity he is now no more than the immaterial excuse for an infinity of legend. Plays without this central and locally characteristic personage,—plays of French or English or German, or even now and then of American authorship, may seem for a time to be the fashion;

but they rarely wear as well as the cheaper and less artistic homespun. That the most of these American products are crude and unrefined, merely the raw material out of which a skillful artificer might make a symmetrical masterpiece, admits of no dispute. An apt epigram is afloat—ascribed to Mr. Boucicault—to the effect that “all that the Americans seem to recognize as dramatic here is the caricature of character, and that is what the successful plays are—caricature of eccentric character set in a weak dramatic framework.” This, like most epigrams, is a smart setting of a half truth. Americans recognize the character through the caricature, accepting the latter only for lack of the former. The want is want of art on the part of the authors, not want of appreciation on the part of audiences. When a strongly marked character is put before them, they will be only the more glad to receive it, if it is artistically developed and presented, and if the action in which it takes part is skillfully ordered. But in general, it is true, the work is not skillfully or artistically done. In general, American comedy, reaching after comic truth, succeeds only in grasping realistic farce. At one time, we have the simplicity and directness of “Davy Crockett;” at another, the vulgar and vapid inanity of “Our Boarding-House,” which

—“filled the stage with all the crowd
Of fools pursuing and of fools pursued.
Whose ins and outs no ray of sense discloses,
Whose deepest plot is how to break folks’ noses.”

But a striving to be a mirror of manners, to reflect human nature as affected by its American environment, has at all times been visible on the stage of our nation, ever since it was a nation. “On the 16th of April, 1786, was performed,” says William Dunlap, in his invaluable history of our early theater, “the first American play which had ever been got up on a regular stage, by a regular company of comedians.” It was “The Contrast,” a comedy in five acts, written by Royal Tyler, afterward Chief-Justice of Vermont. In this first of American plays is to be found the first of stage Yankees. “The comedy,” says Dunlap, “is extremely deficient in plot, dialogue, or incident, but has some marking in the characters, and in that of *Jonathan*, played by Wignell, a degree of humor and knowledge of what is termed Yankee dialect, which, in the hands of a favorite performer, was relished by an audience gratified by the appearance of home manufacture,—a feeling which was soon exchanged

for a most discouraging contempt for every literary home-made effort.” This American distaste for American work, which forced Dunlap to pass off as English his own translations from the German, lasted nearly fifty years, and it was not until well into the second quarter of this century that the American began to make a stand on his own stage. For a score of years or more after 1800, plays taken from Scott’s novels were more frequent and apparently more popular than plays taken from those of Cooper; but as soon as the century got out of its teens the American novelist caught up with his British predecessor, and became as great a favorite as he with play-makers and play-goers.

Few of those who have by heart Woodworth’s little lyric, “The Old Oaken Bucket,” know that its author was a dramatist, and that it was in his pastoral opera, “The Forest Rose, or American Farmers,” produced in October, 1825, at the Chatham Theatre, that the Yankee made his definite re-appearance on the stage. And in “The Forest Rose,” as in “The Contrast,” he was a *Jonathan*, acted at first by a Mr. Simpson, but soon appropriated by “Yankee” Hill, with whom it was always a favorite part. A few months after, James H. Hackett, having been unfortunate in business, adopted the stage as a profession; and, influenced partly perhaps by the recent production of “The Forest Rose,” and partly by the great success he had achieved in the telling of a Yankee story, he determined to devote himself in a measure to the acting of Yankee parts, which served also as an excellent foil to his broken-French characters, and gave him occasion for showing that versatility of which every actor seeks to give proof. Success attended his efforts, and Hackett* was for many years one of the most prominent figures on our stage. Nor was his acting confined to this country; he was one of the first of American actors to go to England, seeking success in the land which had hitherto provided America with most of its actors and actresses, and which was rather surprised at receiving anything in return.

* A son of Hackett is now Recorder of the city of New York, a relationship which gives point to the note at the bottom of the printed programme issued during the Christmas holidays, a few years ago, by the inmates of our state-prison. “Happy New-Year, 1875. Grand entertainment at the Sing Sing Prison, to commence at 8 A. M. * * * N. B. Tickets of admission may be had at the Court of General Sessions. John K. Hackett, Manager. No extra charge for reserved seats.”

Hackett's first success as an actor of Yankee parts was in 1828, in his own alteration of the farce by George Colman the younger, "Who Wants a Guinea?" into "Jonathan in England," in which the original British *Solomon Gundy* is changed into an American *Solomon Swap*,—a rather high-handed conversion, which greatly excited Colman's ire when, as examiner of plays, he was called upon to license for performance in London this perversion of his own handiwork. Five or six years later, Hackett repeated the attempt, playing *Paul Pry* in Yankee dialect!—surely one of the most curious experiments in the history of the drama. He did not, however, confine himself to these alterations, but sought diligently for wholly original American parts; and, after two or three ventures, he made a great success, in 1831, as *Colonel Nimrod Wildfire*, in a comedy called "The Lion of the West," written for him by one of the foremost figures in our literature then, although now well-nigh forgotten—James K. Paulding. The part suited him so well that when in England afterward he had a sequel to it written by Bayle Bernard, called "The Kentuckians," in which he, of course, appeared as *Colonel Nimrod*.

The "Forest Rose" and Hackett's *Solomon Swap* revealed the theatrical possibilities of the Yankee character, and when Hackett went to England, in 1833, other actors were prompt to seize the occasion. The only one who was capable of stepping into his shoes was George Handel Hill, best remembered now as "Yankee" Hill. He not only played *Jonathan*, but appropriated *Solomon Swap*, making Hackett almost as indignant as Hackett had made Colman. Hill had been on the stage for years before Woodworth's play turned his attention to Yankee parts; and, while he lacked Hackett's culture and advantages, he probably acted the broad Down-Easter with less effort, and therefore more effect. Mr. Ireland, a careful critic, preferred Hill to Hackett in Yankee parts, and even intimates that it was Hill's success which led Hackett to rely less on this one dialect, and to develop his broken German in "Rip Van Winkle," and his broken French in "M. Mallet." In imitation and emulation of Hackett, Hill went to London in 1836, acting Yankee parts at Drury Lane and the Haymarket;

the English now began to have some slight notion of American peculiarities, thanks to the elder Mathews's "Trip to America." Hill even performed twice in Paris; but I have not been able to find any contemporary French criticism of his acting. Just what effect *Hiram Dodge*, the Yankee peddler, would have produced upon M. Jules Janin, it would be curious to know. If the French did not take to this part any better than they took to *Asa Trenchard* in 1867, I doubt whether the performance was very lively. But it was of an American audience that Hill used to tell one of his most amusing stories. He once "showed"—to use a professional phrase—in a town in the western part of New York, where no theatrical performance had ever been given. He found the audience assembled with the women seated on one side of the hall, the men on the other, exactly as they were used to sit in church; and throughout the play the most solemn silence was observed. They were attentive, but they gave no evidence of approval or displeasure; there was no applause, no laughter; there was not even a smile;



MR. JAMES H. HACKETT AS "NIMROD WILDFIRE," IN "THE LION OF THE WEST." (FROM AN ORIGINAL DRAWING FROM LIFE BY A. ANDREWS. COPIED BY PERMISSION OF H. B. BOLT.)



MR. F. S. CHANFRAU AS "MOSE." (BY PERMISSION, AFTER LITHOGRAPH DRAWN BY JAMES BROWN.)

all was solemn stillness. Hill did his utmost to break the ice; he did everything a clever comedian could do, but in vain. He flung himself against their rigidity; it was no use. The audience was evidently on its best behavior, and the curtain came down at last amid a silence oppressive and almost melancholy. After the play, Hill, worn out by his extra exertion and mortified at his want of success, was passing through a public room of his hotel, when he was stopped by a tall country-man with the remark:

"Say, mister, I was in to the play to-night."

"Were you?" said Hill. "You must have been greatly entertained."

"Well, I was! I tell you what it is now, my mouth is all sore a-straining to keep my face straight. And if it hadn't been for the women, I'd 'a' laughed right out in meetin'."

Following in the footsteps of Hackett and Hill, and playing parts which differed but little from theirs in kind, came Dan Marble.

Taking advantage of the Sam Patch excitement, he appeared as *Sam Patch* in a little drama of that name, in which we find the first of those "sensation headers," or frightening leaps, with which later play-goers have been made acquainted in the "Colleen Bawn" and the "Romance of a Poor Young Man." "Sam Patch" was first acted in 1836 and its success started Marble as a "star." Ten years later he appeared as *Sam Patch in France*. His biographer gives the names of a score or more of plays in which he acted a Yankee, most of them having been written expressly for him. Two of the best of these were the "Vermont Wool-dealer," and "Yankee Land," both by Cornelius A. Logan, a Western comedian, a brother of the senator and the father of Miss Eliza Logan. Another of Marble's plays was "Family Ties," a comedy to which was awarded a prize of \$500 offered by the actor for the best play suited for his own acting; it was written by T. M. Field, a well-

known comic writer of those days under the name of "Straws," and now remembered as the father of Miss Kate Field. Marble, although then popular, was an actor fond of very coarse and broad effects of a kind which would now meet with no acceptance.

We have now come nearly to the middle of the century and have seen the gradual growth of that strange creature, the stage-Yankee, as unnatural surely as the stage-Cockney or the stage-Frenchman. In nearly all of these plays of Hackett's, and Hill's, and Marble's, and of Silsbee's, who in turn came to the front as an actor of Yankee parts—in nearly all of them is to be detected a strong odor of wooden nutmegs and shoepeg oats, in nearly all of them is to be heard much bragging and tall talk, and much sharp practice is to be seen. There was none of the quiet humor of the "Biglow Papers," or of "Oldtown Folks." The stage-Yankee was coarse, exaggerated and extravagant; the real Yankee, if he ever had been like the attempt at reflecting him, had long ceased to bear any recognizable resemblance to the caricature of succeeding actors. And as the Yankee on the stage had met with appreciation merely because he was in some measure at least a presentation of the truth, so as soon as he had crystallized into that impossible being, the stage-Yankee, so soon did he begin to pass out of the public approval. And for the first ten years of the second half of the century, our theaters saw but little of him, saw him indeed in a state of decay,—and he has not since shown many signs of vigor.

It is related that when Thackeray was last in New York he expressed a great desire to see and converse with the "Bowery boy," indigenous to this city and now extinct, but then flourishing freely in the favorable atmosphere of the Volunteer Fire Department. One day, in Union Square, a specimen of this class was pointed out to the inquisitive novelist.

"Can I speak to him?" asked he. "And what shall I say?"

"Oh, anything," was the answer of a

friend standing by. "Ask him your way. He is affable enough."

And the tall Englishman walked up to the rather short, red-shirted American and, after some hesitation, said:

"I want to go to the Bowery."

Looking up at the speaker, the Bowery boy amiably answered:



"Well, you can go, sonny, ef you don't stay long!"

It was this type of character—this ignorant and vulgar fellow, this rough-hewn, good-hearted fire-laddy—that made the next stage-success in this city. It was discovered that the public was interested in seeing a photographic transfer from street-life. Like many another great discovery, this was the result of accident. In 1848 there was a little

theater in Broadway, near Howard street, called the Olympic, managed by Mitchell and modeled in part at least on the London Olympic of Madame Vestris, and famed for its farces and burlesques. It was here that the little ballet interlude, "The Maiden and the Savage," taken from "Nicholas Nickleby," was performed to crowded houses, with Mitchell as *Crummles*; and here, February 15th, 1848, for the benefit of the prompter Baker, was brought out a hasty sketch called "A Glance at New York," into which the New York fireman had been introduced. The actor cast for *Mose* was a young New Yorker named Chanfrau. He imitated his prototype to the life; he had the dress, the look, the tone, the manner of the real *Mose*. So skillfully was it done, that Mitchell, the manager, seeing him in the green-room before the piece began, took him for a real fireman who had intruded himself behind the scenes and asked him what he wanted there. The play was wretched, but the reality of Mr. Chanfrau's personation took effect immediately; the piece was at once re-arranged: the part of *Mose* was amplified; a partner for him was introduced—his "gal" *Lise*, charmingly acted by Miss Mary Taylor; and then *Mose* was the success of the season, running seventy nights—a very long run in a city of but little more than four hundred thousand inhabitants. Other theaters were anxious to share the popularity of the player, and for a long time Mr. Chanfrau acted the part twice nightly, once at the Olympic and again at the Chat-ham. For a few days he even played it three times a night, the third performance being given in Newark. "A Glance at New York" is in print and any one can see what a coarse and vulgar piece of work it is. The dozen other plays in which *Mose* appeared in the next few years are of the same character: merely rough outline sketches in which one figure was firmly filled in—this rounded completeness of the central character being wholly due to the photographic skill of the actor. Among these crude compositions were "Mose in California," which ran twelve weeks; "Mose in China," and "Mose in a Muss." As time passed on, the interest of the public in the part slackened and the character itself began to pass out of existence—for, in these days of paid fire departments and self-propelling steam-engines, *Mose* would find his occupation gone and would sigh in vain for a congenial sphere. But before the fireman finally faded from sight in New York,

Mr. De Bar took him over to London—where of course he found himself without a friend or even an acquaintance; and Mr. John E. Owens carried him to Philadelphia, where he was called *Jakey*, and where his stay was pleasant and profitable.

It is very rare that an actor who has made so marked a hit in any one part is ever able afterward to repeat the feat, but Mr. Chanfrau has done it. During the twenty years following the first appearance of *Mose*, Mr. Chanfrau played all manner of parts from *Richelieu* to the negro *Wool* in a dramatization of Mrs. Southworth's "Hidden Hand"; among these many parts was that of my Lord Dundreary's brother *Sam*, which he acted for over a hundred nights in New York; and then about eight years ago the actor set before us another picture from American life—a picture as original and as firm in its outlines as *Mose* and far less vulgar. In *Kit* the Arkansas traveler, Mr. Chanfrau presents the South-westerner, the man of the Missouri and the Mississippi. The play, the frame-work into which the character is set, is not remarkable; the villain, for instance, is impossibly villainous and the comic persons are impossibly comic, but in *Kit* himself we have a vivid and vigorous presentation of a simple and manly nature; and Mr. Chanfrau has seized the elements of the character and utilized them with real mimetic skill—in look, in language, in intonation he is the wronged Arkansan, seeking the wife and child stolen from him and devoting himself to the destruction of the man who has robbed him of them. The part of *Kit* is one of strong individuality emphasized by the bold art of the actor; the weak point of the play is that this personality is not shown to us dramatically, it is only exhibited theatrically—that is to say, there is scarcely a single real "situation" in "Kit," there is no inward strife in *Kit's* breast, there is no ebb and flow of emotion. He is set before us pictorially, not revealed to us dramatically; this of course is not the actor's fault, but the play-maker's.

But "Kit" has one great merit, if, as seems probable, the fact that Mr. Spencer had set the Arkansas traveler on the stage suggested to Mr. Murdoch the possibility of putting Davy Crockett into a play. Now, Mr. Murdoch's "Davy Crockett" is a play to be thankful for. Its hero is as little like the real Davy Crockett (a pretty hard customer, I take it) as Robertson's *David Garrick* is like the real David Garrick; in neither play have the situations or the central characters any claim to biographic value. But

the name was popular, and Mr. Murdoch made use of it to provide a background, and to suggest an atmosphere for a character as direct and as manly as *Kit*. *Davy Crockett* is as acceptable to the audience as *Kit*, and he has the advantage over the Arkansas traveler in that the progress of the story gives him occasion to reveal himself in repeated acts of simple heroism. One of these instances of bravery was the "sensation" of the piece. "Sensation," it must be remembered, is only reprehensible when it is obtruded for its own sake; and this "sensation" was perfectly legitimate, since, however thrilling it was in itself, it was developed naturally out of the course of the action, which in turn it helped along; moreover, it did not in any way affect the really pastoral flavor of the play. The story of the piece is in essence identical with that of "Young Lochinvar,"—a resemblance by no means concealed on the part of the playwright, but brought at once into view by the skillful use of the ballad to stir the soul of the young hunter, and to awaken him to a consciousness of his love and to the possibility, perhaps, of its success. The heroine and the man whom her father intends her to marry are forced to take shelter in *Davy Crockett's* cabin. Here, to give her warmth, he burns the bar of the door, while she reads him Scott's ballad. Of a sudden, the moaning of wolves is heard. The door, now lacking its bar, is open to any. Quick as thought *Davy Crockett* thrusts his arm through the staples, in lieu of the bar, and stands to his post until daylight drives away the wolves. This scene—the hero holding the door while the wolves are howling around the lonely cabin and thrusting their heads into the frequent crevices—this is the "sensation" of the play. Like the ballad which serves as the back-bone of the piece, the situation is a reminiscence of Scott, and had already been borrowed from the *Waverley* novels to do duty in a drama by the elder Dumas, a writer of enormous originality and productive capacity, who, however, was never above

"lifting" a trifle like this when it happened to hit his fancy.

The author of "*Davy Crockett*," Mr. Frank Hitchcock, had taken the pen-name of Murdoch, borrowing it from his maternal



uncle, Mr. James E. Murdoch, the Shaksperian reader and actor. He had written other plays, one of which, called "*Bohemia*," was brought out at the Arch Street Theatre, in Philadelphia, and was so hardly handled by the critics that the author lost faith and hope and died at the early age of thirty.

"'Tis strange the mind, that very fiery particle,
Should let itself be snuffed out by an article."

Writing to Mr. Frank Mayo, he spoke of the criticisms on his play and said, "Ah, well, they have struck home"; and in two

days he was dead from brain fever. He did not even live to see Mr. Mayo bring out "Davy Crockett" in 1872 at the Rochester Theatre, which the actor was then managing; and it is perhaps as well that he did not,—for the play failed dismally when first acted. But the actor had more healthy obstinacy; he believed firmly in the piece, and he soon found the public beginning to appreciate it. The play was fortunate in falling into the hands of an actor who not only had faith in it, but whose experience and appearance fitted him fully for the part of the hero. Mr. Mayo's robust and ample style suits the stalwart character of the strong-armed and quick-witted frontiersman, while his sympathetic feeling for ideal beauty has led him to round out the part by many a delicate touch and finishing stroke, added one by one during nearly two thousand performances of the play throughout the Union.

The Davy Crockett of real life, the Davy Crockett before whose rifle the 'coon prom-

at the same time as the mimic Crockett was like the real Crockett, in that he was a South-western politician. *Colonel Mulberry Sellers* had taken part in the recent unpleasantness; he was on the defeated side, but magnanimously resolving to let by-gones be by-gones, he soon determined "to go in for the OLD FLAG!"—and an appropriation." *Colonel Sellers* is a gentleman of magnificent vistas. He sees vast avenues of wealth opened to him on all sides by his ever alert invention, and, in the meantime, is as poor as a church mouse. But no poverty can dull the edge of his quick-set intellect. If his steamboat scheme fails, he takes up a corn speculation; he sees "millions in it;" and if that flags he can fall back on hogs—and feed the corn to them. He has an unbounded faith in himself, a faith which most of his associates needs must share, despite his frequent mishaps and miscalculations. Now there was in this character something which exactly fell in with the times, and it was small wonder as soon as the novel of

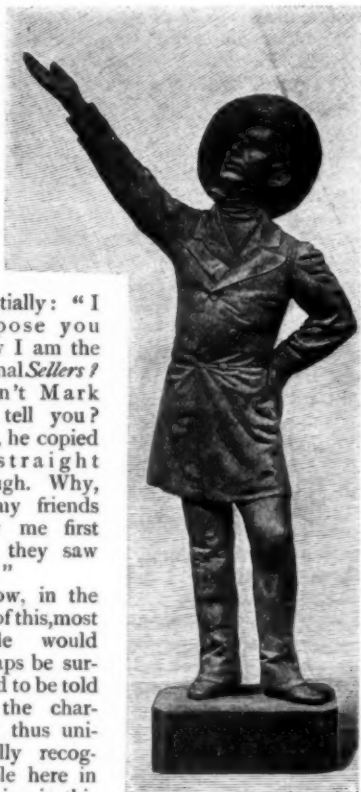
Messrs. Clemens and Warner was issued, that an enterprising play-maker sought to set the sanguine *Sellers* at once upon the stage. This first adaptation had the good luck to be bought by the one actor who, by temperament and training, was capable of doing it justice. In the hands of Mr. John T. Raymond, the careless, reckless, airy brag and boundless anticipations of the character were rounded into a harmonious whole, and the character itself was shown to be simple and strong behind all its eccentricities. And there was something in it that all Americans, in those days when the gilding was first washed from the age most of us had taken for solid gold,—there was something in it we all could recognize; in fact, there was scarce one of us who had not *Colonel Sellers* or some blood-relative of his for a friend; there was scarce one of us who had not put money in schemes hardly more fantastic than the visionary Kentuckian's Oriental Eye-water. Indeed, this general recognition of the truth of the character was pushed so far as to point out not one, but many originals, from whom the portrait had been



MR. W. J. FLORENCE AS "HON. BARDWELL SLOTE," IN "THE MIGHTY DOLLAR."

ised to come down, was something of a politician, taking the stump at times, and even getting himself elected to Congress. And a personage who came into existence almost

drawn. Mr. Raymond has told me that he rarely acts the character for a week, in any part of the country, without having at least one inhabitant of the place say to him con-



MR. JOHN T. RAYMOND AS "COLONEL SELLERS" IN "THE GILDED AGE."
(FROM THE STATUETTE BY MR. J. S. HARTLEY.)

fidentially: "I suppose you know I am the original *Sellers*? Didn't Mark ever tell you? Well, he copied me straight through. Why, all my friends knew me first time they saw you!"

Now, in the face of this, most people would perhaps be surprised to be told that the character thus universally recognizable here in America in this gilded age of ours was no less well known in the golden age of England, under the successor of Elizabeth. But such is the fact. There is extant a comedy by one Ben Jonson, first acted at the Blackfriars Theatre in 1616. It is called "The Divell is an Ass," and it contains a character, *Meercraft*, who is seemingly a direct ancestor of our friend *Colonel Sellers*. His very first speech is:

* * * Sir, money is
Fit to run out on errands; let her go.
Via, pecunia! When she's run and gone,
And fled, and dead; then will I fetch her again,
With *agua vite*, out of an old hog's head!
While there are lees of wine, or dregs of beer,
I'll never want her! Coin her out of cobwebs,
Sir, and make grass grow out of marrow bones,
Dust, but I'll have her! Raise wool upon egg-
shells,

To make her come * * *
* * * I would but see the creature
Of flesh and blood, the man, the prince indeed,

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That could employ so many millions
As I would help him to.

["The Divell is an Ass," Act ii. scene 1.

So much for his general declaration: in his particular projects he also foreshadows the Kentucky colonel. He takes a prospectus from his attendant—

What hast thou there?

O! '*Making wine of raisins*': this is in hand now.
Eugene. Is not that strange, sir, to make wine of raisins?

Meercraft. Yes, and as true a wine as the wines of France,

Or Spain or Italy: look of what grape
My raisin is, that wine I'll render perfect,
As of the Muscatel grape, I'll render Muscatel;
Of the Canary, his; the claret, his;
So of all kinds: and bate you of the prices
Of wine throughout the kingdom half in half.

Eug. But now, sir, if you raise the other commodity,

Raisins?

Meercraft. Why, then I'll make it out of black-berries

And it shall do the same. 'Tis but more art,
And the charge less.

[Act ii., scene 1.

And in a later act another money-making scheme is suggested which runs easily in team with *Colonel Mulberry Sellers's* Infallible Oriental Eye-Water.

Lady T. Do you hear?

Have you a business about tooth-picks?

Meercraft. Yes, madam:

Did I ne'er tell it you? I meant to have offer'd it
Your ladyship, on the perfecting the patent.

Lady T. How is it?

Meercraft. For serving the whole state with tooth-picks;

Somewhat an intricate business to discourse: but I show how much the subject is abused,
First, in that one commodity; then what diseases
And putrefactions in the gums are bred,
By those are made of adulterate and false wood;
My plot for reformation of these, follows:
To have all tooth-picks brought into an office,
There seal'd, and such as counterfeit them mulcted.
And last, for vending them, to have a book
Printed, to teach their use, which every child
Shall have throughout the kingdom, that can read,
And learn to pick his teeth by: which beginning
Early to practise, with some other rules,
Of never sleeping with the mouth open, chewing
Some grains of mastic, will preserve the breath
Pure and so free from taint—

[Act iv., scene 1.

Unfortunately, this all seems insincere and hollow, for *Meercraft* is a conscious knave who but devises these schemes the better to befool gullible mankind; while our *Colonel Sellers* is as honest as may be and as sincere, and deceives himself quite as much as he deceives his neighbor. Still the comparison is curious.

Unfortunately, too, "The Divell is an Ass"

is a much better play than "The Gilded Age," which has nearly every fault a play can have and still stand the glare of the foot-lights. After Mr. Raymond had bought the first stage-adaptation of the story, he found it was unauthorized, and that Mr. Clemens had expressly reserved the right to dramatize his novel, so that actor and author made a new compact, and the play in which Mr. Raymond now acts is the work of Mark Twain himself. It is difficult to speak of it seriously; its construction is infantine; its introduction of a steamboat explosion is puerile; its incidents, where they are not forced and improbable, are trivial and trite; it has no dramatic development of either action or character; even *Colonel Sellers* himself has no vital connection with the story and is exhibited to us merely in speech instead of being shown in action. It is only in the trial scene that the actor has a chance to do much else than talk; and in connection with this it is to be noted that the only scene in "Ah Sin," by Messrs. Bret Harte and Mark Twain (and the second play of each of them), which had any value or merit whatever was the spirited and characteristic trial before Judge Lynch in the last act, a scene worthy of the hand that wrote the classic "Buck Fanshaw's Funeral," or of the other and gentler hand which set down for us the fate of the "Outcasts of Poker Flat."

Author after author has attempted a picture of the manners and morals of society at the capital of the nation. In Mr. Benedict's "My Daughter Elinor," in Mr. Harte's "Story of a Mine," in Mr. De Forest's "Honest John Vane" and again in his "Playing the Mischief," we get either a slight glimpse or a full view of the lobby and of the man "inside politics"; even *Colonel Sellers* must needs come to Washington to see in person after that appropriation. When the stage made its next snatch for another typical American it grasped a full-fledged member of the lower house, engaged in feathering his own nest. *Judge Bardwell Slote* is M. C. for the Cohosh district. He appears in a play called "The Mighty Dollar," by Mr. B. E. Woolf. He is a good-natured, well-meaning, half-educated politician, with little knowledge and no principles. He is a fair specimen of those who take the stump before election, only to roll logs after it. The part is played by Mr. W. J. Florence with a richness of humorous caricature which almost redeems the inherent vulgarity of the character. The

performance is pitched in a burlesque key, and in quiet burlesque informed with drolery Mr. Florence is admirable. He acts the character with great zest, and in marvelous "make-up." The smirking, grasping, greedy, shrewd and yet simple politician has been endowed by the author of the play with certain superficial characteristics of which the actor makes the most. Chief among these is a habit of preluding a phrase with the initials of its words, and as the orthography of *Judge Slote* is not impeccable, the result is often absurdly comic. This peculiarity is only veneered on; it is not of necessity a part of the conception of *Slote*, who in all essentials would remain the same without this trick. And here we have a fault frequently found in American writing for the stage: a bundle of characteristics is too often substituted for character, in spite of the fact that characteristics are at best but the finger-posts to character.

"The Mighty Dollar," which first put in an appearance in New York in September, 1875, was originally designated as "an American comedy," a designation very soon changed to "a humorous satire." In truth, the piece was neither comedy nor satire. In as far as it was good—that is to say, in the parts played by Mr. Florence and by Mrs. Florence, who, as *Mrs. General Gilflory*, represented a sort of American *Mrs. Malaprop*, who had been born here and had spent much of her time in the demoralizing circles of the American colony in Paris,—in these parts it was a not unskillful blending of farce and burlesque. All the rest of it was most dreary stuff akin to the so-called "society-plays" with which we are often afflicted, and inferior to them in that it lacked motive and cohesion. In spite of these obvious defects, "The Mighty Dollar" was carried for over a hundred nights at the Park Theatre, where "The Gilded Age" had previously achieved a hundred performances. Both plays have been acted at other theaters in this city again and again, meeting with acceptance in spite of faults visible to the youngest of play-goers, and owing their success solely to the fact that the principal figure in each was represented with remarkable skill, and contained elements of character readily recognizable by all.

I have purposely omitted until now all mention of two characters of American growth as widely known as any hitherto here described—*Solon Shingle* and *Rip Van Winkle*. I place the two parts together

because, although they are at present identified with two different actors whose performances of them have been widely appreciated, they have received the shape they now retain at the hands of one man—the late Charles Burke, who died in 1854, at the early age of thirty-two. A most promising career was thus untimely ended. Charles Burke was the half-brother of Mr. Joseph Jefferson, who often played with him in minor parts, and who cherishes his memory in the greatest respect. Mr. Jefferson has even been known to say that if “my brother Charley had only lived, the world would never have heard of me.”—an assertion which may well be doubted by any one who can appreciate the truth and delicacy of Mr. Jefferson's own endeavors as an actor. About the middle of this century, when Mr. Chanfrau, just after his success as *Mose*, was managing the National Theatre, Charles Burke was his stage-manager,—“and he was the best stage-manager I ever knew, except Mitchell,” said Mr. Chanfrau, when telling the writer the circumstances of Burke's first appearance as *Solon Shingle*. One day, in looking over a lot of MS. plays, Mr. Chanfrau found the “People's Lawyer,” a two-act comedy by Dr. J. S. Jones, of Boston, a prolific playwright thirty or forty years ago. Knowing that it contained a Yankee part, played originally by an old actor named Spear, now in the Forrest Home, and performed afterward by Hill, Mr. Chanfrau drew it to the attention of Burke, who had often before played Yankee parts with success. A few weeks later the piece was produced with Burke as *Solon Shingle*. Spear and Hill, whom Burke had never seen in the part, had played it as a sort of young and Yankee *Paul Pry*. Burke, bringing to all his work a precious faculty of seeing and thinking for himself, appeared as an old and simple-minded Massachusetts farmer, intent on “his bar'l o' apple-sass.” Burke's success in the part brought the play again into notice, and in 1854 the part of *Solon Shingle* was acted at the Baltimore Museum by Mr. John E. Owens, whose ownership of the character has never since been disputed. Ten years later, on August 31st, 1864, at the old Broadway Theatre, just below Broome street, Mr. Owens' performance of *Solon Shingle* met with the immediate and marked popular approval of the metropolis, and the little old-fashioned play was one of the greatest successes of the season. Mr. Owens has more than once played it again in this city, and his acting

of *Solon Shingle* is always seen with pleasure. He gives us a direct and simple picture of a homely New England farmer, loquacious, inquisitive, shrewd in a measure, full of his own importance,—a picture which recalls Mr. Winslow Homer's studies of farm-life,—a picture not sufficiently ideal to call out the finest qualities of the actor, but real and distinct to an extraordinary degree.

In “Rip Van Winkle,” Burke's share was less. The first dramatic version of Washington Irving's legend was produced at the Park Theatre in this city, April 22, 1830, by Hackett. Afterward, when Hackett appeared in London, this adaptation was revised by Bayle Bernard. Hackett's performance of *Rip* is greatly praised by no less an authority than Sol. Smith, who considered him without a rival in the part. “I should despair,” he writes, “of finding a man or woman in an audience of five hundred who could hear Hackett's utterance of five words in the second act, ‘But she was mine vrow,’ without experiencing some moisture in the eyes.” Burke, about the middle of the century, prepared his own version of the play, which is extant in print. Like Hackett's, it is in two acts, and—like Hackett's again in all probability—it leans unduly toward broad fun. Burke's version did not differ greatly from Hackett's, and one or the other of them was acted about all over the country by any performer who took a fancy to the character. Mr. Chanfrau, for instance, played the part repeatedly for several years. There was thus accumulated by this exercising of many minds trained in theatrical perception, a fund of “business,” of bits of dialogue and bits of by-play, all tending toward the elaboration of the character and its greater effect before the foot-lights. But all was vague and varying, and greatly needed condensation and reduction to coherence.

At this time, in 1865, there arrived in England from Australia a young American actor, Mr. Joseph Jefferson, the third bearer of this honored name on the American stage, and the original performer, it may be noted, of two well-known Yankee parts, *Salem Scudder* in “The Octoroon,” and *Asa Trenchard* in “The American Cousin,” both of which in his hands became possible beings, not the impossible caricatures we generally see them. To gain the opportunity of acting in London a new play was needed. Mr. Jefferson had played in “Rip Van Winkle” with his half-brother, and had since acted the character himself in America

and Australia with great success, and was thus possessed of all the traditions of the part, besides much "business" invented by himself. This mass of material he took to Mr. Dion Boucicault. The dramatist soon extracted from the actor's notes and notions the very clever play as we now have it, for the first time appearing in three acts, owing

don Adelphi Theatre, and Mr. Jefferson's success was instantaneous and prolonged. A year later, Mr. Jefferson appeared as *Rip* at the Olympic Theatre in New York, and at the end of this engagement, he played the part throughout the country with unceasing approval.

Mr. Jefferson is an actor of exquisite art.



to the development of the scene with Hudson's men. This scene existed in the old versions, but now takes a whole act to itself, and an act in which not a word is spoken save by *Rip* himself, excepting only the ghostly toast carried by the elfish spirits to "Rip! Rip! Rip!" In September, 1865, the transformed play was produced at the Lon-

As a comedian, he would hold his own beside the finest comic artists of France—M. Regnier, M. Got, M. Coquelin. The portrait he presents of *Rip Van Winkle* is a singularly felicitous example of the possible union of great breadth and freedom of effect with the utmost delicacy and refinement. Mr. Jefferson's *Rip Van Winkle* has an ideal

elevation, while at the same time, it is thoroughly human. It is saturated with kindly and wholesome humor, and the spirit of gentleness pervades it. Although *Rip* himself is an idle good-for-nothing and ne'er-do-well, we accept Mr. Jefferson's presentation of him as a personification of the beautiful and the good.

These are the principal types of American character which the dramatic art has sought to set on our stage. If comedy be a mirror in which the age is reflected and in which we are to see ourselves, then these plays show the age to be a very queer age and exhibit us as a very peculiar people. If, as De Quincey says, "the acknowledged duty of comedy" is "to fathom the coynesses of human nature and to arrest the fleeting phenomena of human demeanor," then the American comedy we have been here considering has been most remiss in its duty, for it has neither fathomed coynesses, nor arrested phenomena; rarely has it even hinted that human nature had any coyness, and its only suggestion of phenomena was in the sense in which the word was used by Mr. Crumple, the father of the infant. The most that can be said for it is that it has seized and concentrated certain of the floating characteristics of the many atoms of American life, presenting them before us with the rigor and the vigor of a photograph,—sometimes the pose has been chosen with more taste, sometimes the photograph has been more skillfully manipulated than at others; at best, the result is mechanical and lacks the freedom of art. We have had hitherto in comedy outline types, as it were, the equivalent of the conventional characters of the early Italian *commedie dell' arte*. *Mose* is from New York, and *Asa Trenchard* is from Vermont, and *Judge Bardwell Slote* is from the Cohosh district, just as *Pantaloen* was from Venice and

Punchinello from Naples. With the change of time we are ready and fit for something more and something finer.

The first requisite of the stage is strongly defined characters, well contrasted; human nature is the fund on which the dramatist may draw at will. De Quincey, in the essay from which a quotation has already been made, declares that "Comedy, as the reflex of the current of social life, will shift in correspondence to the shifting movements of civilization. Inevitably, as human intercourse in cities grows more refined, comedy will grow more subtle; it will build itself on distinctions of character less grossly defined, and on features of manners more delicate and impalpable." It is to be hoped that in due course of time some one will supply the demand



MR. JOSEPH JEFFERSON AS "RIP VAN WINKLE."

which has thus arisen for a dramatist capable of putting an American on the stage as true to life as *Colonel Sellers* and far more subtle than *Judge Slote*,—one in fact whom we shall all be as willing to acknowledge as we are Winthrop's *John Brent*, Mr. Harte's *John Oakhurst* or Mr. James's *Christopher Newman*.

FRIEND BARTON'S "CONCERN."



"I THOUGHT YOU WERE THERE, DOROTHY."

It had been "borne in" upon him, more or less, during the long winter; it had not relaxed its hold when the frosts unlocked and the streams were set free from their long winter's silence among the hills. He grew restless and abstracted under "the turnings of the Lord's hand upon him," and his speech unconsciously shaped itself into the Biblical cadences which came to him in his moments of spiritual exercise.

The bedrabbled snows of March shrank away before the keen, quickening sunbeams; the hills emerged, brown and sodden, like the chrysalis of the new year. The streams woke in a tumult, and all day and night their voices called from the hills back of the mill. The waste-weir was a foaming torrent, and spread itself in muddy shallows across the meadow beyond the old garden where the robins and blue-birds were house-hunting. Friend Barton's trouble stirred with the life-blood of the year, and pressed upon him sorely; but as yet he gave it no words. He plodded about among his lean kine, tempering the winds of March to his untimely lambs, and reconciling unnatural ewes to their maternal duties.

Friend Barton had never heard of the doctrine of the survival of the fittest; though it was the spring of 1812, and England and America were investigating the subject on the seas, while the nations of Europe were practically illustrating it. The "hospital tent," as the boys called an old corn-basket, covered with carpet, which stood beside the kitchen chimney, was seldom without an

occupant,—a brood of chilled chickens, a weakly lamb, or a wee pig (with too much blue in its pinkness), which had been left behind by its stouter brethren in the race for existence. The old mill hummed away through the day, and often late in the evening if time pressed, upon the grists which added a thin, intermittent stream of tribute to the family income. Whenever work was "slack," Friend Barton was sawing or chopping in the wood-shed adjoining the kitchen; every moment he could seize or make he was there, stooping over the rapidly growing pile.

"Seems to me, father, thee's in a great hurry with the wood this spring. I don't know when we've had such a pile ahead."

"'Twont burn up any faster for being chopped," Friend Barton said; and then his wife Rachel knew that if he had a reason for being "forehanded" with the wood, he was not ready to give it.

One rainy April afternoon, when the smoky gray distances began to take a tinge of green, and through the drip and rustle of the rain the call of the robins sounded, Friend Barton sat in the door of the barn, oiling the road-harness. The old chaise had been wheeled out and greased, and its cushions beaten and dusted.

An ox-team with a load of grain creaked up the hill and stopped at the mill door. The driver, seeing Friend Barton's broad-brimmed drab felt hat against the dark interior of the barn, came down the short lane leading from the mill past the house and farm-buildings.

"Fixin' up for travelin', Uncle Tommy?"

Vain compliments were unacceptable to Thomas Barton, and he was generally known and addressed as "Uncle Tommy" by the world's people of a younger generation.

"It is not in man that walketh to direct his own steps, neighbor Gordon. I am getting myself in readiness to obey the Lord, whichever way He calls me."

Farmer Gordon cast a shrewd eye over the premises. They wore that patient, sad, exhumed look which old farm-buildings are apt to have in early spring. The roofs were black with rain, and brightened with patches of green moss. Farmer Gordon instinctively calculated how many "bunches o' shingle" would be required to rescue them from the decline into which they had fallen, in spite of the hectic green spots.

"Wal, the Lord calls most of us to stay at home and look after things, such weather as this. Good plantin' weather; good weather for breakin' ground; fust-rate weather for millin'! This is a reg'lar miller's rain, Uncle Tommy. You ought to be takin' advantage of it. I've got a grist back here; wish ye could manage to let me have it when I come back from store."

The grist was ground and delivered before Friend Barton went in to his supper that night. Dorothy Barton had been mixing bread, and was wiping her white arms and hands on the roller towel by the kitchen door, as her father stamped and scraped his feet on the stones outside.

"I do believe I forgot to toll neighbor Gordon's rye," he said, as he gave a final rub on the broom Dorothy handed out to him. "It's wonderful how careless I get!"

"Well, father, I don't suppose thee'd ever forget, and toll a grist twice!"

"I believe I've been mostly preserved from mistakes of that kind," said Friend Barton gently. "It may have been the Lord who stayed my hand from gathering profit unto myself while his lambs go unfed."

Dorothy put her hands on her father's shoulders. She was almost as tall as he, and could look into his patient, troubled eyes.

"Father, I know what thee is thinking of; but do think *long*. It will be a hard year; the boys *ought* to go to school; and mother is so feeble."

Friend Barton's "concern" kept him awake long that night. His wife watched by his side, giving no sign, lest her wakeful presence should disturb his silent wrestlings. The tall, cherry-wood clock in the entry

measured the hours as they passed with its slow, dispassionate tick.

At two o'clock Rachel Barton was awakened from her first sleep of weariness by her husband's voice whispering heavily in the darkness.

"My way is hedged up! I see no way to go forward. Lord, strengthen my patience, that I murmur not, after all I have seen of Thy goodness. I find daily bread is very desirable; want and necessity are painful to nature; but shall I follow Thee for the sake of the loaves, or will it do to forsake Thee in times of emptiness and abasement?"

There was silence again, and restless tossings and sighings continued the struggle.

"Thomas," the wife's voice spoke tremulously in the darkness, "my dear husband, I know where thy thoughts are tending. If the Spirit is with thee, do not deny it for our sakes, I pray thee. The Lord did not give thee thy wife and children to hang as a millstone round thy neck. I am thy helpmeet, to strengthen thee in his service. I am thankful that I have my health this spring better than usual, and Dorothy is a wonderful help. Her spirit was sent to sustain me in thy long absences. Go, dear, and serve our master, who has called thee in these bitter strivings! Dorothy and I will keep things together as well as we can. The way will open—never fear!" She put out her hand and touched his face in the darkness; there were tears on the furrowed cheeks. "Try to sleep, dear, and let thy spirit have rest. There is but one answer to this call."

With the first drowsy twitterings of the birds, when the crescent-shaped openings in the board shutters began to define themselves clearly in the shadowy room, they arose and went about their morning tasks in silence. Friend Barton's step was a little heavier than usual, and the hollows round his wife's pale brown eyes were a little deeper. As he sat on the splint-bottomed chair by the kitchen fire-place, drawing on his boots, she laid her hands on his shoulders, and her cheek on the worn spot on the top of his head.

"Thee will lay this concern before meeting to-morrow, father?"

"I had it on my mind to do so,—if my light be not quenched before then."

Friend Barton's light was not quenched. Words came to him without seeking, in which to "open the concern which had ripened in his mind," of a religious visit to the meeting constituting the yearly meetings of Philadelphia and Baltimore. A "min-

ute" was given him encouraging him in the name of, and with the full concurrence of, the monthly meetings of Nine Partners, and Stony Valley, to go wherever the Truth might lead him.

While Friend Barton was thus freshly

"Is it anything important, mother? I want to get my twenty knots before dinner." She paused as she joined a long tress of wool at the spindle. "Is it anything about father?"

"Yes, it's about father, and all of us."



"IS IT ANYTHING ABOUT FATHER?"

anointed, and "abundantly encouraged," his wife, Rachel, was talking with Dorothy in the low upper chamber, known as the "wheel-room."

Dorothy was spinning wool on the big wheel, dressed in her light calico short gown, and brown quilted petticoat; her arms were bare, and her hair was gathered away from her flushed cheeks, and knotted behind her ears. The roof sloped down on one side, and the light came from a long low window under the eaves. There was another window (shaped like a half moon high up in the peak), but it sent down only one long beam of sunlight, which glimmered across the dust, and fell upon Dorothy's white neck.

The wheel was humming a quick measure, and Dorothy trod lightly back and forth, the wheel-pin in one hand, the other upraised holding the tense, lengthening thread, which the spindle devoured again.

"Dorothy, thee looks warm:—can't thee sit down a moment, while I talk to thee?"

"I know," said Dorothy, stretching herself back with a sigh. "He's going away again!"

"Yes, dear. He feels that he is called. It is a time of trouble and contention everywhere,—the harvest truly is plenteous, but the laborers are few."

"There are not so many 'laborers' here, mother, though to be sure, the harvest——"

"Dorothy, my daughter! don't let a spirit of levity creep into thy speech. Thy father has striven and wrestled with his urgings. I've seen it working on him all winter; he feels now it is the Lord's will."

"I don't see how he can be so sure," said Dorothy, swaying gloomily to and fro against the wheel. "I don't care for myself,—I'm not afraid of work,—but *thee's* not able to do what thee does *now*, mother. If I have outside things to look after, how can I help thee as I should? The boys are about as much dependence as a flock of barn swallows!"

"Don't fret about me, dear; the way will open. Thy father has thought and planned for us; have patience while I tell thee. Thee knows Walter Evesham's pond is small and his mill is doing a thriving business?"

"Yes, I know it!" Dorothy exclaimed. "He has his own share, and ours too—most of it!"

"Wait, dear, wait! Thy father has rented him the ponds to use when his own gives out. He is to have the control of the water, and it will give us a little income, even though the old mill does stand idle."

"He may as well take the mill, too. If father is away all summer it will be useless ever to start it again. Thee'll see, mother, how it will end if Walter Evesham has the custom and the water all summer. I think it's miserable for a young man to be so keen about money."

"Dorothy, seems to me thee's hasty in thy judgments. I never heard that said of Walter Evesham. His father left him with capital to improve his mill. It does better work than ours; we can't complain of that. Thy father was never one to study much after ways of making money. He felt he had no right to more than an honest livelihood. I don't say that Walter Evesham's in the wrong. We know that Joseph took advantage of his opportunities, though I can't say that I ever felt much unity with some of his transactions. What would thee have, my dear? Thee's discouraged with thy father for choosing the thorny way, which we tread with him; but thee seems no better satisfied with one who considers the flesh and its wants!"

"I don't *know*, mother, *what* I want for myself. It doesn't matter, but for thee I would have rest from all these cruel worries thee has borne so long."

She buried her face in her mother's lap and put her strong young arms about the frail, toil-bent form.

"There, there, dear. Try to rule thy spirit, Dorothy. Thee's too much worked up about this. They are not worries to me. I am thankful we have nothing to decide, one way or the other—only to do our best with what is given us. Thee's not thyself, dear. Go down-stairs and fetch in the clothes, and don't hurry; stay out till thee gets more composed."

Dorothy did not succeed in bringing herself into unity with her father's call, but she came to a fuller realization of his struggle. When he bade them good-bye, his face

showed what it had cost him, but Rachel was calm and cheerful. The pain of parting is keenest to those who go, but it stays longer with those who are left behind.

"Dorothy, take good care of thy mother!" Friend Barton said, taking his daughter's face between his hands and gravely kissing her brow between the low-parted ripples of her hair.

"Yes, father," she said, looking into his eyes. "Thee knows I'm thy eldest son."

They watched the old chaise swing round the corner of the lane, then the pollard willows shut it from sight.

"Come, mother," said Dorothy, hurrying her in at the gate. "I'm going to make a great pot of mush, and have it hot for supper, and fried for breakfast, and warmed up with molasses for dinner, and there'll be some cold with milk for supper, and we sha'n't have any cooking to do at all."

They went round to the kitchen door. Rachel stopped in the wood-shed, and the tears rushed to her eyes.

"Dear father! How he has worked over that wood, early and late, to spare us!"

We will not revive Dorothy's struggles with the farm-work and with the boys. They were an isolated family at the mill-house; their peculiar faith isolated them still more, and they were twelve miles from meeting, and the settlement of Friends at Stony Valley. Dorothy's pride kept her silent about her needs, lest they might bring reproach upon her father among the neighbors, who would not be likely to feel the urgency of his spiritual summons.

The summer heats came on apace and the nights grew shorter. It seemed to Dorothy that she had hardly stretched out her tired young body and forgotten her cares in the low, attic bedroom, before the east was streaked with light and the birds were singing in the apple-trees, whose falling blossoms drifted in at the window.

One day in early June, Friend Barton's flock of sheep—consisting of nine experienced ewes, six yearlings and a sprinkling of close-curved lambs whose legs had not yet come into mature relations with their bodies—were gathered in a little railed inclosure, beside the stream which flowed into the "mill-head." It was supplied by the waste from the pond, and when the gate was shut, rambled easily over the gray slate pebbles, with here and there a fall, just forcible enough to serve as a douche-bath for a well-grown sheep. The victims were pant-

ing in their heavy fleeces, and their hoarse, plaintive tremolo mingled with the ripple of the water and the sound of young voices in a frolic. Dorothy had divided her forces for the washing to the best advantage. The two elder boys stood in the stream to receive the sheep, which she, with the help of little Jimmy, caught and dragged to the bank.

The boys were at work now upon an elderly ewe, while Dorothy stood on the brink of the stream, braced against an ash sapling, dragging at the fleece of a beautiful but reluctant yearling. Her bare feet were incased in a pair of moccasins which laced around the ankle; her petticoats were kilted, and her broad hat bound down with a ribbon; one sleeve was rolled up, the other had been sacrificed in a scuffle in the sheep-pen. The new candidate for immersion stood bleating and trembling, with her fore feet planted against the slippery bank, pushing back with all her strength, while Jimmy propelled from the rear.

"Boys!" Dorothy's clear voice called across the stream. "*Do* hurry! She's been in long enough, now! Keep her head up, can't you, and squeeze the wool *hard*! You're not *half* washing! Oh, Reuby! thee'll drown her! Keep her *head* up!"

Another unlucky douse and another half-smothered bleat,—Dorothy released the yearling and plunged to the rescue. "Go after that lamb, Reuby!" she cried, with exasperation in her voice. Reuby followed the yearling, which had disappeared over the orchard slope, upsetting an obstacle in its path, which happened to be Jimmy. He was now wailing on the bank, while Dorothy, with the ewe's nose tucked comfortably in the bend of her arm, was parting and squeezing the fleece, with the water swirling round her. Her stout arms ached, and her ears were stunned with the incessant bleatings; she counted with dismay the sheep still waiting in the pen. "Oh, Jimmy! *do* stop crying, or else go to the house!"

"He'd better go after Reuby," said Sheppard Barton, who was now Dorothy's sole dependence.

"Oh yes; do, Jimmy, that's a good boy. Tell him to let the yearling go, and come back quick."

The water had run low that morning in Evesham's pond. He shut down the mill, and strode up the hills, across lots, to raise the gate of the lower Barton Pond, which had been heading up for his use. He passed the corn-field where, a month before,

he had seen pretty Dorothy Barton dropping corn with her brothers. It made him ache to think of Dorothy, with her feeble mother, the boys, as wild as preacher's sons proverbially are, and the old farm running down on her hands; the fences all needed mending, and there went Reuben Barton, now, careering over the fields in chase of a stray yearling. His mother's house was big, and lonely, and empty; and he flushed as he thought of the "one ewe-lamb" he coveted, out of Friend Barton's rugged pastures. As he raised the gate, and leaned to watch the water swirl and gurgle through the "trunk," sucking the long weeds with it, and thickening with its tumult the clear current of the stream, the sound of voices and bleating of sheep came up from below. He had not the farming instincts in his blood;—the distant bleating, the hot June sunshine and cloudless sky, did not suggest to him sheep-washing;—but now came a boy's voice, shouting, and a cry of distress, and he remembered, with a thrill, that Friend Barton used the stream for that peaceful purpose. He shut down the gate and tore along through the ferns and tangled grass till he came to the sheep-pen, where the bank was muddy and trampled. The prisoners were bleating drearily and looking with longing eyes across to the other side, where those who had suffered were now straying and cropping the short turf, through the lights and shadows of the orchard.

There was no other sign of life, except a broad hat with a brown ribbon, buffeted about in an eddy, among the stones. The stream dipped now below the hill and the current, still racing fast with the impetus he had given it, shot away amongst the hazel thickets which crowded close to the brink. He was obliged to make a detour by the orchard, and come out at the "mill-head" below;—a black, deep pool, with an ugly ripple setting across it to the "head-gate." He saw something white clinging there and ran round the brink. It was the sodden fleece of the old ewe which had been drifted against the "head-gate," and held there to her death. Evesham, with a sickening contraction of the heart threw off his jacket for a plunge, when Dorothy's voice called rather faintly from the willows on the opposite bank.

"Don't jump! I'm here," she said. Evesham searched the willows, and found her seated in the sun just beyond, half buried in a bed of ferns.

"I wouldn't have called thee," she said,

shyly, as he sank, pale and panting, beside her, "but thee looked—I thought thee was going to jump into the mill-head!"

"I thought *you* were there, Dorothy!"

"I was there quite long enough. Shep pulled me out; I was too tired to help myself much." Dorothy held her palm pressed against her temple, and the blood trickled from beneath, streaking her pale, wet cheek.

"He's gone to the house to get me a cloak. I don't want mother to see me—not yet," she said.

"I'm afraid you ought not to wait, Dorothy. Let me take you to the house, wont you? I'm afraid you'll get a deadly chill."

Dorothy did not look in the least like death. She was blushing now, because Evesham would think it so strange of her to stay, and yet she could not rise in her wet clothes, which clung to her like the calyx to a bud.

"Let me see that cut, Dorothy, *please!*"

"Oh, it's nothing. I don't *wish* thee to look at it!"

"But I will! Do you want to make me your murderer—sitting there in your wet clothes, with a cut on your head?"

He drew away her hand, and the wound, indeed, was no great affair, but he bound it up deftly with strips of his handkerchief. Dorothy's wet curls touched his fingers and clung to them, and her eyelashes drooped lower and lower.

"I think it was *very* stupid of thee. Didn't thee hear us from the dam? I'm sure we made noise enough."

"Yes, I heard you when it was too late. I heard the sheep before, but how could I imagine that *you*, Dorothy, and three boys, as big as cockerels, were sheep-washing? It's the most preposterous thing I ever heard of!"

"Well, I can't help being a woman, and the sheep had to be washed. I think there ought to be more men in the world when half of them are preaching and fighting."

"If you'd only let the men who are left help you a little, Dorothy!"

"I don't want any help. I only *don't* want to be washed into the mill-head."

They both laughed, and Evesham began again entreating her to let him take her to the house.

"Hasn't thee a coat or something I could put around me until Shep comes?" said Dorothy. "He must be here soon."

"Yes, I've got a jacket here somewhere."

He sped away to find it, and faithless Dorothy, as the willows closed between

them, sprang to her feet and fled like a startled Naiad to the house.

When Evesham, pushing through the willows, saw nothing but the bed of wet, crushed ferns and the trail through the long grass where Dorothy's feet had fled, he smiled grimly to himself, remembering that "ewe-lambs" are not always as meek as they look.

That evening Rachel had received a letter from Friend Barton, and was preparing to read it aloud to the children. They were in the kitchen, where the boys had been helping Dorothy, in a desultory manner, to shell corn for the chickens; but now all was silence, while Rachel wiped her glasses and turned the large sheet of paper, squared with many foldings, to the candle.

She read the date, "London Grove, 5th month, 22nd.—Most affectionately beloved." "He means us all," said Rachel, turning to the children with a tender smile. "It's spelled with a small b."

"He means thee!" said Dorothy, laughing. "Thee's not such a very big beloved."

There was a moment's silence. "I don't know that the opening of the letter is of general interest," Rachel mused, with her eyes traveling slowly down the page. "He says: 'In regard to my health, lest thee should concern thyself, I am thankful to say I have never enjoyed better since years have made me acquainted with my infirmities of body, and I earnestly hope that my dear wife and children are enjoying the same blessing.'"

"I trust the boys are not deficient in obedience and helpfulness. At Sheppard's age I had already begun to take the duties of a man upon my shoulders."

Sheppard giggled uncomfortably, and Dorothy laughed outright.

"Oh! if father only *knew* how good the boys are! Mother, thee must write and tell him about their 'helpfulness and obedience'! Thee can tell him their appetites keep up pretty well; they manage to take their meals regularly, and they are *always* out of bed by eight o'clock, to help me hang up the milking-stool!"

"Just wait till thee gets in the mill-head again, Dorothy Barton! Thee needn't come to *me* to help thee out!"

"Go on, mother! Don't let the boys interrupt thee!"

"Well," said Rachel, rousing herself, "where was I? Oh, 'when I was Sheppard's age'! Well, next come some allusions to the places where he has visited, and

his spiritual exercises there. I don't know that the boys are quite old enough to enter into this yet. Thee'd better read it thyself, Dorothy. I'm keeping all father's letters for the boys to read, when they are old enough to appreciate them."

"Well, I think thee might read us about where he's been preachin'! We can understand a great deal more than thee thinks we can!" said Shep, in an injured voice. "Reuby, he can preach some himself! Thee ought to hear him, mother. It's almost as good as meetin'!"

"I wondered how Reuby spent his time!" said Dorothy, and the mother hastened to interpose.

"Well! here's a passage that may be interesting: 'On sixth day attended the youths' meeting here,—a pretty favored time on the whole. Joseph' [that's Joseph Carpenter; he mentions him always back] 'had good service in lively testimony, while I was calm and easy, without a word to say. At a meeting at Plumstead, we suffered long, but at length we felt relieved. The unfaithful were admonished, the youth invited, and the heavy-hearted encouraged. It was a heavenly time!' Heretofore he seems to have been closed up with silence a good deal; but now the way opens continually for him to free himself. He's been 'much favored,' he says, 'of late.' Reuby, what's thee doing to thy brothers?" (Shep and Reuby, who had been persecuting Jimmy by pouring handfuls of corn down the neck of his jacket until he had taken refuge behind Dorothy's chair, were now recriminating with corn-cobs on each other's faces.) "Dorothy, can't thee keep those boys quiet?"

"Did thee ever know them to be quiet?" said Dorothy, helping Jimmy to relieve himself of his corn.

"Well now, listen!" Rachel continued placidly, "'Second day, 27th' (of fifth month, he means, the letter's been a *long time* coming), 'attended their mid-week meeting at London Grove, where my tongue as it were clave to the roof of my mouth, while Hannah Husbands was much favored, and enabled to lift up her voice like the song of an angel!'"

"Who's Hannah Husbands?" cried Dorothy.

"Thee don't know her, dear. She was second cousin to thy father's step-mother; the families were not congenial, I believe; but she has a great gift for the ministry."

"I should think she'd better be at home with her children,—if she has any. Fancy

thee, mother, going about to strange meetings, and lifting up thy voice."

"Hush! hush! Dorothy! Thy tongue's running away with thee. Consider the example thee's setting the boys."

"Thee'd better write to father about Dorothy, mother! Perhaps Hannah Husbands would like to know what she thinks about her preachin'!"

"Well now, be quiet, all of you. Here's something about Dorothy: 'I know that my dear daughter Dorothy is faithful and loving, albeit somewhat quick of speech, and restive under obligation. I would have thee remind her that an unwillingness to accept help from others argues a want of Christian Meekness. Entreat her, from me, not to conceal her needs from our neighbors, if so be she find her work oppressive. We know them to be of kindly intention, though not of our way of thinking in all particulars. Let her receive help from them, not as individuals, but as instruments of the Lord's protection, which it were impiety and ingratitude to deny.'"

"There!" cried Shep. "That means thee's to let Luke Jordan finish the sheep-washing. Thee'd better have done it in the first place. We wouldn't have the old ewe to pick if thee had!"

Dorothy was dimpling at the idea of Luke Jordan in the character of an instrument of Heavenly protection. She had not regarded him in that light, it must be confessed, and had rejected him with scorn.

"He may, if he wants too," she said; "but you boys shall drive them over. I'll have nothing to do with it."

"And shear them too, Dorothy? He asked to shear them long ago."

"Well, let him shear them, and keep the wool too."

"I wouldn't say that, Dorothy!" said Rachel Barton. "We need the wool, and it seems as if over-payment might not be quite honest either."

"Oh! mother, mother! What a mother thee is!" cried Dorothy laughing, and rumpling her cap-strings in a tumultuous embrace.

"She's a great deal too good for *thee*, Dorothy Barton."

"She's too good for all of us! How did thee ever come to have such a graceless set of children, mother?"

"I'm very well satisfied," said Rachel. "But now do be quiet, and let's finish the letter. We must get to bed sometime to-night!"

The wild clematis was in blossom now—the fences were white with it, and the rusty cedars were crowned with virgin wreaths, but the weeds were thick in the garden and in the potato patch. Dorothy, stretching her cramped back, looked longingly up the shadowy vista of the farm-lane, which had nothing to do but ramble off into the remotest green fields, where the daisies' faces were as white and clear as in early June.

One hot August night she came home late from the store. The stars were thick in the sky; the katy-dids made the night oppressive with their rasping questionings, and a hoarse revel of frogs kept the ponds from falling asleep in the shadow of the hills.

"Is thee very tired to-night, Dorothy?" her mother asked, as she took her seat on the low step of the porch. "Would thee mind turning old John out thyself?"

"No, mother, I'm not tired. But why—oh, I know!" cried Dorothy, with a quick laugh. "The dance—at Slocum's barn. I *thought* those boys were uncommonly helpful."

"Yes, dear, it's but natural they should want to see it. Hark! we can hear the music from here."

They listened and the breeze brought across the fields the sound of fiddles and the rhythmic tramp of feet, softened by the distance. Dorothy's young pulses leaped.

"Mother, is it any harm for them just to see it? They have so little fun except what they get out of teasing and shirking."

"My dear, thy father would never countenance such a scene of frivolity, or permit one of his children to look upon it."

Through our eyes and ears the world takes possession of our hearts.

"Then I'm to spare the boys this temptation, mother? Thee will trust *me* to pass the barn?"

"I would trust my boys, if they were thy age, Dorothy. But their resolution is tender, like their years."

It might be questioned whether the frame of mind in which the boys went to bed that night, under their mother's eye,—for Rachel could be firm in a case of conscience,—was more improving than the frivolity of Slocum's barn.

"Mother," called Dorothy, looking in at the kitchen window, where Rachel was stooping over the embers in the fire-place, to light a bed-room candle, "I want to speak to thee."

Rachel came to the window, screening the candle with her hand.

"Will thee trust *me* to look at the dancing a little while? It is so very near."

"Why, Dorothy, does thee *want* to?"

"Yes, mother, I believe I do. I've never seen a dance in my life. It cannot ruin me to look just once."

Rachel stood puzzled.

"Thee's old enough to judge for thyself, Dorothy. But, my child, do not tamper with thy inclinations through heedless curiosity. Thee knows thee's more impulsive than I could wish—for thy own peace."

"I'll be very careful, mother. If I feel in the *least* wicked I will not look."

She kissed her mother's hand, which rested on the window-sill. Rachel did not like the kiss, or Dorothy's brilliant eyes and flushed cheeks, as the candle revealed them like a fair picture painted on the darkness. She hesitated, and Dorothy sped away up the lane with old John lagging at his halter.

Was it the music growing nearer that quickened her breathing, or only the closeness of the night, shut in between the wild grape-vine curtains, swung from one dark cedar column to another? She caught the sweet-brier breath as she hurried by, and now, a loop in the leafy curtain revealed the pond lying black in a hollow of the hills, with a whole heaven of stars reflected in it. Old John stumbled along over the stones, cropping the grass as he went. Dorothy tugged at his halter and urged him on to the head of the lane where two farm-gates stood at right angles. One of them was open and a number of horses were tethered in a row along the fence within. They whinneyed a cheerful greeting to John as Dorothy slipped his halter and shut him into the field adjoining. Now should she walk into temptation with her eyes and ears open? The gate stood wide, with only one field of perfumed meadow-grass between her and the lights and music of Slocum's barn! The sound of revelry by night could hardly have taken a more innocent form than this rustic dancing of neighbors after a "raisin' bee," but had it been the rout of Comus and his crew, and Dorothy the Lady Una, trembling near, her heart could hardly have throbbed more thickly as she crossed the dewy meadow. A young maple stood within ten rods of the barn and here she crouched in shadow.

The great doors stood wide open and lanterns were hung from the beams lighting the space between the mows, where a dance was set, with youths and maidens in

two long rows. The fiddlers sat on barrel-heads near the door; a lantern hanging just behind projected their shadows across the square of light on the trodden space in front where they executed a grotesque pantomime, keeping time to the music with spectral wavings and noddings. The dancers were Dorothy's young neighbors, whom she had known and yet not known all her life, but they had the strangeness of familiar faces seen suddenly in some fantastic dream.

Surely that was Nancy Slocum, in the bright pink gown, heading the line of girls, and that was Luke Jordan's sunburnt profile leaning from his place to pluck a straw from the mow behind him. They were marching, now, and the measured tramp of feet, keeping solid time to the fiddles, set a strange tumult vibrating in Dorothy's blood; and now it stopped with a thrill as she recognized that Evesham was there marching with the young men, and that his peer was not among them. The perception of his difference came to her with a vivid shock. He was coming forward now, with his light, firm step, formidable in evening dress, and with a smile of subtle triumph in his eyes, to meet Nancy Slocum, in the bright pink gown; Dorothy felt she hated pink, of all the colors her faith had abjured. She could see, in spite of the obnoxious gown, that Nancy was very pretty. He was taking her first by the right hand, then by the left, and turning her gayly about;—and now they were meeting again, for the fourth or fifth time, in the center of the barn, with all eyes upon them, and the music lingered while Nancy, holding out her pink petticoats, coyly revolved around him. Then began a mysterious turning, and claspings of hands, and weaving of Nancy's pink frock and Evesham's dark blue coat and white breeches in and out of the line of figures, until they met at the door, and, taking each other by both hands, swept with a joyous measure to the head of the barn. Dorothy gave a little choking sigh.

What a senseless whirl it was! But she was thrilling with a new and strange excitement, too near the edge of pain to be long endured as a pleasure. If this were the influence of dancing, she did not wonder so much at her father's scruples,—and yet it held her like a spell.

All hands were lifted now, making an arch, through which Evesham, holding Nancy by the hands, raced stooping and laughing. As they emerged at the door, he threw up his head to shake a brown lock

back. He looked flushed, and boyishly gay, and his hazel eye searched the darkness with that subtle ray of triumph in it which had made Dorothy afraid. She drew back behind the tree and pressed her hot cheek to the cool, rough bark. She longed for the stillness of the starlit meadow, and the dim lane, with its faint perfumes and whispering leaves.

But now suddenly the music stopped, and the dance broke up in a tumult of voices. Dorothy stole backward in the shadow of the tree-trunk, till it joined the darkness of the meadow, and then fled,—stumbling along with blinded eyes, and the music still vibrating in her ears. There came a quick rush of footsteps behind her, swishing through the long grass. She did not look back, but quickened her pace, struggling to reach the gate. Evesham was there before her. He had swung the gate to and was leaning with his back against it, laughing and panting.

"I've caught you, Dorothy, you little deceiver! You'll not get rid of me to-night with any of your tricks. I'm going to take you home to your mother, and tell her you were peeping at the dancing."

"Mother knows I am here," said Dorothy. "I asked her!" Her knees were trembling, and her heart almost choked her with its throbbing.

"I'm so glad you don't dance, Dorothy. This is much nicer than the barn; and the katy-dids are better fiddlers than old Darby and his son. I'll open the gate if you will put your hand in mine, so I can be sure of you—you little runaway!"

"I will stay here all night, first!" said Dorothy, in a low quivering voice.

"As you choose. I shall be happy as long as you are here."

Dead silence, while the katy-dids seemed to keep time to their heart-beats; the fiddles began tuning for another reel, and the horses tethered near stretched out their necks with low inquiring whinnies.

"Dorothy," said Evesham, softly, leaning toward her and trying to see her face in the darkness, "are you angry with me? Don't you think you deserve a little punishment for the trick you played me at the mill-head?"

"It was thy fault for wetting me!" Dorothy was too excited and angry to cry, but she was as miserable as she had ever been in her life before. "I didn't *want* thee to stay. People who force themselves where they are not wanted must take what they get!"

"What did you say, Dorothy?"

"I say I didn't want thee then. I do not want thee now! Thee may go back to thy fiddling and dancing! I'd rather have one of those dumb brutes for company to-night than thee, Walter Evesham!"

"Very well! The reel has begun," said Evesham. "Fanny Jordan is waiting to dance it with me, or if she isn't she ought to be! Shall I open the gate for you?"

She passed out in silence, and the gate swung to with a heavy jar. She made good speed down the lane, and then waited outside the fence till her breath came more quietly.

"Is that thee, Dorothy?" Rachel's voice called from the porch. She came out to meet her, and they went along the walk together. "How damp thy forehead is, child! is the night so warm?" They sat down on the low steps, and Dorothy slid her arm under her mother's and laid her soft palm against the one less soft by twenty years of toil for others. "Thee's not been long, dear; was it as much as thee expected?"

"Mother, it was dreadful! I never wish to hear a fiddle again as long as I live!"

Rachel opened the way for Dorothy to speak further; she was not without some mild stirrings of curiosity on the subject herself; but Dorothy had no more to say.

They went into the house soon after, and as they separated for the night, Dorothy clung to her mother with a little nervous laugh.

"Mother, what is that text about Ephraim?"

"Ephraim is joined to idols?" Rachel suggested.

"Yes! Ephraim is joined to his idols!" said Dorothy, lifting her head. "Let him go!"

"Let him *alone*," corrected Rachel.

"Let him *alone*!" Dorothy repeated.

"That is better yet."

"What's thee thinking of, dear?"

"Oh, I'm thinking about the dance in the barn."

"I'm glad thee looks at it in that light," said Rachel.

Dorothy knelt by her bed in the low chamber under the eaves, crying to herself that she was not the child of her mother any more.

She felt she had lost something, which, in truth, had never been hers. It was only the unconscious poise of her unawakened girlhood which had been stirred. She had

mistaken it for that abiding peace which is not lost or won in a day.

Dorothy could not stifle the spring thrills in her blood any more than she could crush its color out of her cheek or brush the ripples out of her bright hair, but she longed for the cool grays and the still waters. She prayed that the "grave and beautiful damsel called Discretion" might take her by the hand and lead her to that "upper chamber, whose name is Peace." She lay awake, listening to the music from the barn, and waiting through breathless silences for it to begin again. She wondered if Fanny Jordan had grown any prettier since she had seen her as a half-grown girl; and then she despised herself for the thought. The katydids seemed to beat their wings upon her brain, and all the noises of the night, far and near, came to her strained senses, as if her silent chamber were a whispering gallery. The clock struck twelve, and in the silence that followed she missed the music; but voices, talking and laughing, were coming down the lane. There was the clink of a horse's hoof on the stones; now it was lost on the turf; and now they were all trooping noisily past the house. She buried her head in her pillow, and tried to bury with it the consciousness that she was wondering if Evesham were there, laughing with the rest.

Yes, Evesham was there. He walked with farmer Jordan, behind the young men and girls, and discussed with him, somewhat absently, the war news and the prices of grain.

As they passed the dark old house, spread its wide roofs, like a hen gathering her chickens under her wing, he became suddenly silent. A white curtain flapped in and out of an upper window. It was the window of the boys' room; but Evesham's instincts failed him there.

"Queer kinks them old Friend preachers git into their heads sometimes!" said farmer Jordan, as they passed the empty mill. "Now what do you s'pose took Uncle Tommy Barton off right on top of plantin', leavin' his wife 'n' critters 'n' child'en to look after themselves? Mighty good preachin' it ought to be, to make up for such practicin'. Wonderful set ag'in the war, Uncle Tommy is! He's a-preachin' up peace now. But Lord! all the preachin' sence Moses wont keep men from fightin' when their blood's up and there's ter'tory in it!"

"It makes saints of the women," said Evesham shortly.

"Wal, yes! Saints in heaven before their

time, some of 'em. There's Dorothy, now. *She'll* hoe her row with any saint in the kingdom or out of it. I never see a hul-somer lookin' gal. My Luke, he run the furrers in her corn-patch last May. Said it made him sick to see a gal like that a-staggerin' after a plow. She wouldn't more'n half let him! She's a proud little piece. They're all proud, Quakers is. I never could see no 'poorness of spirit,' come to git at 'em! And they're wonderful clannish, too. My Luke, he'd a notion he'd like to run the hull concern—Dorothy 'n' all; but I told him he might's well p'int off. Them Quaker gals don't never marry out o' meetin'. Besides, the farm's too poor!"

"Good-night, Mr. Jordan!" said Evesham suddenly. "I'm off across lots!" He leaped the fence, crashed through the alder hedge-row, and disappeared in the dusky meadow.

Evesham was by no means satisfied with his experiments in planetary distances. Somewhere, he felt sure, either in his orbit or hers, there must be a point where Dorothy would be less insensible to the attraction of atoms in the mass. Thus far, she had reversed the laws of the spheres, and the greater had followed the less. When she had first begun to hold a permanent place in his thoughts, he had invested her with something of that atmosphere of peace and cool passivity which hedges in the women of her faith. It had been like a thin, clear glass, revealing her loveliness, but cutting off the magnetic currents. A young man is not long satisfied with the mystery his thoughts have woven around the woman who is their object. Evesham had grown impatient; he had broken the spell of her sweet remoteness. He had touched her, and found her human,—deliciously, distractingly human, but with a streak of obduracy which history has attributed to the Quakers under persecution. In vain he haunted the mill-dam, and bribed the boys with traps and pop-guns, and lingered at the well-curb to ask Dorothy for water, which did not reach his thirst. She was there in the flesh, with her arms aloft, balancing the well-sweep, while he stooped with his lips at the bucket; but in spirit she was unapproachable. He felt, with disgust at his own persistence, that she even grudged him the water! He grew savage and restless, and fretted over the subtle changes which he counted in Dorothy, as the summer waned. She was thinner and paler,—perhaps with the heats of harvest, which

had not, indeed, been burdensome from its abundance. Her eyes were darker and shyer, and her voice more languid. Was she wearing down, with all this work and care? A fierce disgust possessed him, that this sweet life should be cast into the breach between faith and works.

He did not see that Rachel Barton had changed, too,—with a change that meant more, at her age, than Dorothy's flushings and palings. He did not miss the mother's bent form from the garden, or the bench by the kitchen door, where she had been used to wash the milk-things.

Dorothy washed the milk-things now, and the mother spent her days in the sunny east-room, between her bed and the easy-chair, where she sat and mused for hours over the five letters she had received from her husband in as many months. The boys had, in a measure, justified their father's faith in them, since Rachel's illness, and Dorothy was released from much of her out-door work; but the silence of the kitchen, when she was there alone with her ironing and dish-washing, was a heavier burden than she had yet known.

Nature sometimes strikes in upon the hopeless monotony of life in remote farm-houses, with one of her phenomenal moods. They come like besoms of destruction; but they scatter the web of stifling routine; they fling into the stiffening pool the stone which jars the atoms into crystal.

The storms which had ambushed in the lurid August skies, and circled ominously round the horizon during the first weeks of September, broke at last in an equinoctial which was long remembered in the mill-house. It took its place in the family calendar of momentous dates with the hard winter of 1800; with the late frost, which coated the incipient apples with ice, and froze the new potatoes in the ground; and with the year the typhus got into the valley.

The rain had been falling a night and a day. It had been welcomed with thanksgiving; but it had worn out its welcome some hours since, and now the early darkness was coming on without a lull in the storm. Dorothy and the two biggest boys had made the rounds of the farm-buildings, seeing all safe for the second night. The barns and mill stood on high ground, while the house occupied the sheltered hollow between. Little streams from the hills were washing in turbid currents across the lower levels; the waste-weir roared as in early spring; the garden was inundated, and the

meadow a shallow pond. The sheep had been driven into the upper barn floor; the chickens were in the corn-bin; and old John and the cows had been transferred from the stable, which stood low, to the weighing-floor of the mill. A gloomy echoing and gurgling sounded from the dark wheel-chamber, where the water was rushing under the wheel, and jarring it with its tumult. At eight o'clock the wood-shed was flooded, and water began to creep under the kitchen door. Dorothy and the boys carried armfuls of wood, and stacked them in the passage to the sitting-room, two steps higher up. At nine o'clock the boys were sent, protesting, to bed; and Dorothy, looking out of their window, as she fumbled about in the dark for a pair of Shep's trowsers which needed mending, saw a lantern flickering up the road. It was Evesham, on his way to the mill-dams. The light glimmered on his oil-skin coat as he climbed the stile behind the well-curb.

"He raised the flood-gates at noon," Dorothy said to herself. "I wonder if he is anxious about the dams." She resolved to watch for his return, but she was busy settling her mother for the night, when she heard his footsteps on the porch. The roar of water from the hills startled Dorothy as she opened the door;—it had increased in violence within an hour. A gust of wind and rain followed Evesham into the entry.

"Come in," she said, running lightly across the sitting-room to close the door of her mother's room.

He stood opposite her on the hearth-rug and looked into her eyes across the estrangement of the summer. It was not Dorothy of the mill-head, or of Slocum's meadow, or the cold maid of the well: it was a very anxious, lovely little girl, in a crumbling old house, with a foot of water in the cellar, and a sick mother in the next room. She had forgotten about Ephraim and his idols; she picked up Shep's trowsers from the rug, where she had dropped them, and looking intently at her thimble finger, told him she was very glad he had come.

"Did you think I wouldn't come?" said he. "I'm going to take you home with me, Dorothy,—you and your mother and the boys. It's not fit for you to be here alone!"

"Do you know of any danger?"

"I *know* of none, but water's a thing you can't depend on. It's an ugly rain; older men than your father remember nothing like it."

"I shall be glad to have mother go, and

Jimmy;—the house is very damp. It's an awful night for her to be out, though!"

"She *must* go!" said Evesham. "You must all go. I'll be back in half an hour"——

"I shall not go," Dorothy said; "the boys and I must stay and look after the stock."

"What's that?" Evesham was listening to a trickling of water outside the door.

"Oh! it's from the kitchen! The door's blown open, I guess!"

Dorothy looked out into the passage; a strong wind was blowing in from the kitchen, where the water covered the floor and washed against the chimney.

"This is a nice state of things! What's all this wood here for?"

"The wood-shed's under water, you know."

"You must get yourself ready, Dorothy! I'll come for your mother first in the chaise."

"I cannot go," she said; "I don't believe there is any danger. This old house has stood for eighty years; it's not likely this is the first big rain in all that time." Dorothy's spirits had risen. "Besides, I have a family of orphans to take care of! See here," she said, stooping over a basket in the shadow of the chimney. It was the "hospital tent," and as she uncovered it, a brood of belated chickens stretched out their thin necks with plaintive peeps.

Dorothy covered them with her hands, and they nestled with cozy twitterings into silence.

"You're a kind of special providence, aren't you, Dorothy? But I've no sympathy with chickens who *will* be born just in time for the equinoctial."

"I didn't want them," said Dorothy, anxious to defend her management. "The old hen stole her nest, and she left them the day before the rain. She's making herself comfortable now in the corn-bin."

"She ought to be made an example of;—that's the way of the world, however;—retribution don't fall always on the right shoulders. I must go now. We'll take your mother and Jimmy first, and then, if you *wont* come, you shall let me stay with you. The mill is safe enough, anyhow."

Evesham returned with the chaise and a man who he insisted should drive away old John and the cows, so Dorothy should have less care. The mother was packed into the chaise with a vast collection of wraps, which almost obliterated Jimmy. As they started, Dorothy ran out in the rain with her mother's

spectacles and the five letters, which always lay in a box on the table by her bed. Evesham took her gently by the arms and lifted her back across the puddles to the stoop.

As the chaise drove off, she went back to the sitting-room and crouched on the rug, her wet hair shining in the firelight. She took out her chickens one by one and held them under her chin, with tender words and finger-touches. If September chickens have hearts as susceptible as their bodies, Dorothy's orphans must have been imperiled by her caresses.

"Look here, Dorothy! Where's my trowsers?" cried Shep, opening the door at the foot of the stairs.

Reuby was behind him, fully arrayed in the aforesaid articles, and carrying the bedroom candle.

"Here they are—with a needle in them," said Dorothy. "What are you getting up in the middle of the night for?"

"Well, I guess it's time somebody's up. Who's that man driving off our cows?"

"Goosey! It's Walter Evesham's man. He came for mother and all of us, and he's taken old John and the cows to save us so much foddering."

"Aint we going too?"

"I don't see why we should, just because there happens to be a little water in the kitchen. I've often seen it come in there before."

"Well, thee never saw anything like *this* before—nor anybody else, either," said Shep.

"I don't care," said Reuby; "I wish there'd come a reg'lar flood. We could climb up in the mill-loft and go sailin' down over Jordan's meadows. Wouldn't Luke Jordan open that big mouth of his to see us heave in sight about cock-crow—three sheets in the wind, and the old tackle a-swingin'!"

"Do hush!" said Dorothy. "We may have to try it yet."

"There's an awful roarin' from our window," said Shep. "Thee can't half hear it down here. Come out on the stoop. The old ponds have got their dander up this time."

They opened the door and listened, standing together on the low step. There was, indeed, a hoarse murmur from the hills which grew louder as they listened.

"Now she's comin'! There goes the stable-door! There was only one hinge left, anyway," said Reuby. "Mighty! Look at that wave!"

It crashed through the gate, swept across

the garden and broke at their feet, sending a thin sheet of water over the floor and stoop.

"Now it's gone into the entry. Why didn't thee shut the door, Shep?"

"Well, I think we'd better clear out, anyhow. Let's go over to the mill. Say, Dorothy, sha'n't we?"

"Wait. There comes another wave!"

The second onset was not so violent, but they hastened to gather together a few blankets, and the boys filled their pockets, with a delightful sense of unusualness and peril, almost equal to a shipwreck or an attack by Indians. Dorothy took her unlucky chickens under her cloak and they made a rush, all together, across the road and up the slope to the mill.

"Why didn't we think to bring a lantern?" said Dorothy, as they huddled together on the platform of the scale. "Will *thee* go back after one, Shep?"

"If Reuby'll go, too."

"Well, *my* legs are wet enough now! What's the use of a lantern? Mighty Moses! What's that?"

"The old mill's got under weigh!" cried Shep. "*She's* going to tune up for Kingdom Come!"

A furious head of water was rushing along the race. The great wheel creaked and swung over, and with a shudder the old mill awoke from its long sleep. The cogs clenched their teeth, the shafting shook and rattled, the stones whirled merrily round.

"Now she goes it!" cried Shep, as the humming increased to a tremor, and the tremor to a wild, unsteady din, till the timbers shook and the bolts and windows rattled. "I just wish *father* could hear them old stones hum."

"Oh, this is awful!" said Dorothy. She was shivering, and sick with terror at this unseemly midnight revelry of her grandfather's old mill. It was as if it had awakened in a fit of delirium, and given itself up to a wild travesty of its years of peaceful work.

Shep was creeping about in the darkness.

"Look here! We've got to stop this clatter somehow. The stones are hot now. The whole thing'll burn up like tinder if we can't chock her wheels."

"Shep! Does *thee* mean it!"

"Thee'll see if I don't. Thee wont need any lantern either."

"Can't we break away the race?"

"Oh, there's a way to stop it. There's the tip-trough, but it's down-stairs, and we can't reach the pole."

"I'll go," said Dorothy.

"It's outside, thee knows. Thee'll get awful wet, Dorothy."

"Well, I'd just as soon be drowned as burned up. Come with me to the head of the stairs."

They felt their way hand in hand in the darkness, and Dorothy went down alone. She had forgotten about the "tip-trough" but she understood its significance. In a few moments a cascade shot out over the wheel, sending the water far into the garden.

"Right over my chrysanthemum bed!" sighed Dorothy.

The wheel swung slower and slower, the mocking tumult subsided, and the old mill sank into sleep again.

There was nothing now to drown the roaring of the floods and the steady drive of the storm.

"There's a lantern," Shep called from the door. He had opened the upper half, and was shielding himself behind it. "I guess it's Evesham coming back for us? He's a pretty good sort of a fellow, after all; don't thee think so, Dorothy? He owes us something for drowning us out at the sheep-washing."

"What *does* all this mean?" said Dorothy, as Evesham swung himself over the half-door, and his lantern showed them in their various phases of wetness.

"There's a big leak in the lower dam! I've been afraid of it all along; there's something wrong in the principle of the thing."

Dorothy felt as if he had called her grandfather a fraud, and her father a delusion and a snare. She had grown up in the belief that the mill-dams were part of Nature's original plan, in laying the foundations of the hills;—but it was no time to be resentful, and the facts were against her.

"Dorothy," said Evesham, as he tucked the buffalo about her, "this is the second time I've tried to save you from drowning, but you never will wait! I'm all ready to be a hero, but *you* won't be a heroine."

"I'm too practical for a heroine," said Dorothy. "There! I've forgotten my chickens."

"I'm glad of it! Those chickens were a mistake. They oughtn't to be perpetuated."

Youth and happiness can stand a great deal of cold water; but it was not to be expected that Rachel Barton should be especially benefited by her night journey through the floods. Evesham waited in the hall

when he heard the door of her room open next morning. Dorothy came slowly down the stairs; he knew by her lingering step and the softly closed door that she was not happy.

"Mother is very sick," she answered his inquiry. "It is like the turn of inflammation and rheumatism she had once before. It will be very slow,—and oh! it is such suffering! Why *do* the best women in the world have to suffer so?"

"Will you let me talk things over with you after breakfast, Dorothy?"

"Oh yes!" she said; "there is so much to do and think about. I *wish* father would come home!"

The tears came into Dorothy's eyes as she looked at him. Rest—such as she had never known, or felt the need of till now—and strength immeasurable, since it would multiply her own by an unknown quantity, stood within reach of her hand, but she might not put it out! And Evesham was dizzy with the struggle between longing and resolution.

He had braced his nerves for a long and hungry waiting, but fate had yielded suddenly;—the floods had brought her to him,—his flotsam and jetsam, more precious than all the guarded treasures of the earth. She had come, with all her girlish, unconscious beguilements, and all her womanly cares, and anxieties too. He must strive against her sweetness, while he helped her to bear her burdens.

"Now about the boys, Dorothy," he said two hours later, as they stood together by the fire in the low, oak-finished room at the foot of the stairs, which was his office and book-room. The door was ajar, so Dorothy might hear her mother's bell. "Don't you think they had better be sent to school somewhere?"

"Yes," said Dorothy, "they *ought* to go to school—but—well, I may as well tell thee the truth! There's very little to do it with. We've had a poor summer. I suppose I've managed badly, and mother has been sick a good while."

"You've forgotten about the pond-rent, Dorothy."

"No," she said, with a quick flush; "I hadn't forgotten it; but I couldn't *ask* thee for it!"

"I spoke to your father about monthly payments; but he said better leave it to accumulate for emergencies. Shouldn't you call this an 'emergency,' Dorothy?"

"But does thee think we ought to ask rent for a pond that has all leaked away?"

"Oh, there's pond enough left, and I've used it a dozen times over this summer! I would be ashamed to tell you, Dorothy, how my horn has been exalted in your father's absence. However, retribution has overtaken me at last; I'm responsible, you know, for all the damage last night. It was in the agreement that I should keep up the dams."

"Oh!" said Dorothy; "is thee sure?" Evesham laughed.

"If your father were like any other man, Dorothy, he'd make me 'sure,' when he gets home! I will defend myself to this extent: I've patched and propped them all summer, after every rain, and tried to provide for the fall storms; but there's a flaw in the original plan——"

"Thee said that once before," said Dorothy. "I wish thee wouldn't say it again!"

"Why not?"

"Because I love those old mill-dams! I've trotted over them ever since I could walk alone!"

"You shall trot over them still! We will make them as strong as the everlasting hills. They shall outlast our time, Dorothy."

"Well, about the rent," said Dorothy. "I'm afraid it will not take us through the winter, unless there is something I can do. Mother couldn't possibly be moved now, and if she could, it will be months before the house is fit to live in. But we cannot stay here in comfort, unless thy mother will let me make up in some way. Mother will not need me all the time, and I know thy mother hires women to spin."

"She'll let you do all you like, if it will make you any happier. But you don't know how much money is coming to you. Come, let us look over the figures."

He lowered the lid of the black mahogany secretary, placed a chair for Dorothy, and opened a great ledger before her, bending down, with one hand on the back of the chair, the other turning the leaves of the ledger. Considering the index, and the position of the letter B in the alphabet, he was a long time finding his place. Dorothy looked out of the window, over the tops of the yellowing woods, to the gray and turbid river below. Where the hemlocks darkened the channel of the glen, she heard the angry floods rushing down. The formless rain mists hung low, and hid the opposite shore.

"See!" said Evesham, with his finger wandering rather vaguely down the page. "Your father went away on the third of May. The first month's rent came due on

the third of June. That was the day I opened the gate and let the water down on you, Dorothy. I'm responsible for everything, you see,—even for the old ewe that was drowned!"

His words came in a dream as he bent over her, resting his unsteady hand heavily on the ledger.

Dorothy laid her cheek on the date she could not see, and burst into tears.

"Don't—please don't!" he said, straightening himself, and locking his hands behind him. "I am human, Dorothy!"

The weeks of Rachel's sickness that followed were perhaps the best discipline Evesham's life had ever known. He held the perfect flower of his bliss, unclosing in his hand; yet he might barely permit himself to breathe its fragrance! His mother had been a strong and prosperous woman; there was little he could ever do for her. It was well for him to feel the weight of helpless infirmity in his arms, as he lifted Dorothy's mother from side to side of her bed, while Dorothy's hands smoothed the coverings. It was well for him to see the patient endurance of suffering, such as his youth and strength defied. It was bliss to wait on Dorothy, and follow her with little watchful homages, received with a shy wonder which was delicious to him,—for Dorothy's nineteen years had been too full of service to others to leave much room for dreams of a kingdom of her own. Her silent presence in her mother's sick-room awed him. Her gentle, decisive voice and ways, her composure and unshaken endurance through nights of watching and days of anxious confinement and toil, gave him a new reverence for the mysteries of her unfathomable womanhood.

The time of Friend Barton's return drew near. It must be confessed that Dorothy welcomed it with a little dread, and Evesham did not welcome it at all. On the contrary, the thought of it roused all his latent obstinacy and aggressiveness. The first day or two after the momentous arrival wore a good deal upon every member of the family, except Margaret Evesham, who was provided with a philosophy of her own, which amounted almost to a gentle obtuseness, and made her a comfortable non-conductor, preventing more electric souls from shocking each other.

On the morning of the fourth day, Dorothy came out of her mother's room with a tray of empty dishes in her hands. She saw Evesham at the stair-head and hovered

about in the shadowy part of the hall till he should go down.

"Dorothy," he said, "I'm waiting for you." He took the tray from her and rested it on the bannisters. "Your father and I have talked over all the business. He's got the impression I'm one of the most generous fellows in the world. I intend to let him rest in that delusion for the present. Now may I speak to him about something else, Dorothy? Have I not waited long enough for my heart's desire?"

"Take care!" said Dorothy, softly,—
"thee'll upset the tea-cups!"

"Confound the tea-cups!" He stooped to place the irrelevant tray on the floor, but now Dorothy was half-way down the staircase. He caught her on the landing, and taking both her hands, drew her down on the step beside him.

"Dorothy, this is the second time you've taken advantage of my unsuspecting nature! This time you shall be punished! You needn't try to hide your face, you little traitor! There's no repentance in you!"

"If I'm to be punished there's no need of repentance."

"Dorothy, do you know, I've never heard you speak my name, except once, when you were angry with me."

"When was that?"

"The night I caught you at the gate. You said, 'I would rather have one of those dumb brutes for company than thee, Walter Evesham.' You said it in the fiercest little voice! Even the 'thee' sounded as if you hated me."

"I did," said Dorothy promptly. "I had reason to."

"Do you hate me now, Dorothy?"

"Not so much as I did then."

"What an implacable little Quaker you are!"

"A tyrant is *always* hated," said Dorothy, trying to release her hands.

"If you will look in my eyes, Dorothy, and call me by my name, just once,—I'll let 'thee' go."

"Walter Eversham!" said Dorothy, with great firmness and decision.

"No! that wont do! You must look at me,—and say it softly,—in a little sentence, Dorothy!"

"Will thee please let me go, Walter?"

Walter Evesham was a man of his word, but as Dorothy sped away, he looked as if he wished he were not.

The next evening, Friend Barton sat by his wife's easy-chair, drawn into the circle

of firelight, with his elbows on his knees, and his head between his hands.

The worn spot on the top of his head had widened considerably during the summer, but Rachel looked stronger and brighter than she had for many a day. There was even a little flush on her cheek, but that might have come from the excitement of a long talk with her husband.

"I'm sorry thee takes it so hard, Thomas; I was afraid thee would. But the way didn't seem to open for me to do much. I can see now, that Dorothy's inclinations have been turning this way for some time, though it's not likely she would own it, poor child; and Walter Evesham's not one who is easily gainsayed. If *thee* could only feel differently about it, I can't say but it would make me very happy to see Dorothy's heart satisfied. Can't thee bring thyself into unity with it, father? He's a nice young man. They're nice folks. Thee can't complain of the *blood*. Margaret Evesham tells me a cousin of hers married one of the Lawrences, so we are kind of kin, after all."

"I don't complain of the blood; they're well enough placed as far as the world is concerned! But their ways are not our ways, Rachel! Their faith is not our faith!"

"Well! I can't see such a very great difference, come to live among them! 'By their fruits ye shall know them.' To comfort the widow and the fatherless, and keep ourselves unspotted from the world!—thee's always preached that, father! I really can't see any more worldliness here than among many households with us,—and I'm sure if we haven't been the widow and the fatherless this summer, we've been next to it!"

Friend Barton raised his head a little, and rested his forehead on his clasped hands.

"Rachel," he said, "look at that!" He pointed upward to an ancient sword with belt and trappings, which gleamed on the paneled chimney-piece—crossed by an old queen's arm. Evesham had given up his large sunny room to Dorothy's mother, but he had not removed all his lares and penates.

"Yes, dear; that's his grandfather's sword—Colonel Evesham, who was killed at Saratoga!"

"Why does he hang up that thing of abomination for a light and a guide to his footsteps, if his way be not far from ours?"

"Why, father! Colonel Evesham was a good man!—I dare say he fought for the same reason that thee preaches—because he felt it his duty!"

"I find no fault with *him*, Rachel.

Doubtless he followed his light, as thee says; but he followed it in better ways too. He cleared land and built a homestead and a meeting-house. Why don't his grandson hang up his old broad-ax and plowshare, and worship *them*, if he must have idols, instead of that symbol of strife and bloodshed. Does thee want our Dorothy's children to grow up under the shadow of that sword?"

There was a stern light of prophecy in the old man's eyes.

"May be Walter Evesham would take it down," said Rachel, leaning back wearily and closing her eyes. "I never was much of a hand to argue, even if I had the strength for it; but it would hurt me a good deal—I must say it—if thee denies Dorothy in this matter, Thomas. It's a very serious thing to have old folks try to turn young hearts the way they think they ought to go. I remember now,—I was thinking about it last night, and it all came back as fresh! I don't know that I ever told thee about that young friend who visited me before I heard thee preach at Stony Valley? Well! *father*, he was wonderful pleased with him, but I didn't feel any drawing that way. He urged me a good deal, more than was pleasant for either of us. He wasn't at all reconciled to thee, Thomas, if thee remember."

"I remember," said Thomas Barton, "it was an anxious time."

"Well, dear, if father *had* insisted, and sent thee away, I can't say but life would have been a very different thing to me."

"I thank thee for saying it, Rachel." Friend Barton's head drooped between his hands.

"Thee's suffered much through me; thee's had a hard life, but thee's been well beloved."

The flames leaped and flickered in the chimney, they touched the wrinkled hands, whose only beauty was in their deeds; they crossed the room and lit the pillows where, for three generations, young heads had dreamed, and gray heads had watched and suffered; then they mounted to the chimney and struck a gleam from the sword.

"Well, father," said Rachel, "what answer is thee going to give Walter Evesham?"

"I shall say no more, my dear. Let the young folks have their way. There's strife and contention enough in the world without my stirring up more. And it may be I'm resisting the Master's will; I left her in His care: this may be His way of dealing with her."

Walter Evesham did not take down his grandfather's sword. Fifty years later another went up beside it,—the sword of a young Evesham who never left the field of Shiloh; and beneath them both hangs the portrait of the Quaker grandmother, Dorothy Evesham, at the age of sixty-nine.

The golden ripples, silver now, are hidden under a "round-eared cap," the quick flush has faded in her cheek, and fold upon fold of snowy gauze, and creamy silk, are crossed over the bosom that thrilled to the fiddles of Slocum's barn. She has found the cool grays, and the still waters; but on Dorothy's children rests the "Shadow of the Sword!"

EVENING.

LOST with far murmurs on the hill,
The heifer's amorous voice is still;
Nor flock may feed the meadow more,
And closed is the cotter's door.

Cumbrous beneath benignant trees
The honest ox is at his ease;
While, overhead, the knowing fowl
Avoids the visit of the owl.

All birds keep closer to the nest,
Their song with light went down the West;
Slow night advances as a flower,
Hour imperceptible to hour.

Music has mated with the rill,
And, like a merry maiden, still
She, happy, happy, follows after,
Leaving behind her echoed laughter.

THE WATER-CURE.

A TALE: IN THE MANNER OF PRIOR.

"—portentaque Thessala rides?"
 HOR.
 "—Thessalian portents do you flout?"

CARDENIO's fortunes ne'er miscarried
 Until the day Cardenio married.
 What then? the Nymph no doubt was young?
 She was: but yet—she had a tongue!
 Most women have, you seem to say.
 I grant it—in a different way.

'Twas not that organ half-divine,
 With which, Dear Friend, your spouse or
 mine,
 What time we seek our blameless pillows,
 Rebukes our easy peccadilloes:
 'Twas not so tuneful, so composing;
 'Twas louder and less often dozing;
 At Ombre, Basset, Loo, Quadrille,
 You heard it resonant and shrill;
 You heard it rising, rising yet
 Beyond Selinda's parroquet;
 You heard it rival and outdo
 The chair-men and the link-boy, too;
 In short, wherever lungs perform,
 Like Marlborough, it rode the storm.

So uncontrolled it came to be,
 Cardenio feared his *chère amie*
 (Like Echo by Cephissus shore)
 Would turn to voice and nothing more.
 That ('tis conceded) must be cured
 Which can't by patience be endured.
 Cardenio, though he loved the maid,
 Grew daily more and more afraid;
 And since advice could not prevail
 (Reproof but seemed to fan the gale),
 A prudent man, he cast about
 To find some fitting nostrum out.
 What need to say that useful drug
 Had not in any mine been dug?
 What need to say no skillful leech
 Could check that plethora of speech?
 Suffice it, that one lucky day
 Cardenio tried—another way.

A Hermit (there were hermits then;
 The most accessible of men!)
 Near Vauxhall's sacred shade resided;
 In him, at last, our friend confided.
 (Simple, for show, he used to sell;
 But cast Nativities as well.)
 Consulted, he looked wondrous wise;
 Then undertook the enterprise.

What that might be, the Muse must spare;
 To tell the truth, she was not there.
 She scorns to patch what she ignores
 With similes and metaphors;
 And, in a word, to change the scene,
 Permits ten days to intervene.

Behold our pair then (quite by chance!)
 In Vauxhall's gardens of romance.
 The lamps and grottoes all reviewed;
 The windings of the Maze pursued;
 The fire-works witnessed;—what more pat
 Than seek the Hermit after that?
 Who then more fain her fate to see
 Than this, the new Leuconoë,
 On fire to taste the lore forbidden
 In "Babylonian numbers" hidden? *
 Forthwith they took the darksome road
 To Albumazar his abode.

Arriving, they beheld the sage
 Intent on hieroglyphic page,
 In high Armenian cap arrayed
 And girt with engines of his trade
 (As Skeletons, and Spheres, and Cubes;
 As Amulets and Optic Tubes);
 With dusky depths behind revealing
 Strange shapes that dangled from the ceiling;
 While more to palsy the beholder
 A Black Cat sat upon his shoulder.

The Hermit eyed the Lady o'er
 As one whose face he'd seen before
 And then, with agitated looks,
 He fell to fumbling at his books.
 Cardenio knew his spouse was frightened,
 Her grasp upon his arm had tightened;
 Judge then her horror and her dread
 When Vox Stellarum shook his head;
 Then darkly spake in phrase forlorn
 Of Taurus and of Capricorn;
 Of stars averse, and stars ascendant,
 And stars entirely independent;
 In fact, it seemed that all the Heavens
 Were set at sixes and at sevens,
 Portending, in her case, some fate
 Too fearful to prognosticate.

* "—nec Babylonios
 Tentaris numeros."—HOR. i., XI.

Meanwhile the Dame was well-nigh dead.
 "But is there naught," Cardenio said,
 "No sign or token, Sage, to show
 From whence, or what, this dismal woe?"

The Sage, with circle and with plane,
 Betook him to his charts again.
 "It vaguely seems to threaten Speech:
 No more (he said) the signs can teach."

But still Cardenio tried once more:
 "Is there no potion in your store,
 No charm by Chaldee mage concerted
 By which this doom can be averted?"

The Sage, with motion doubly mystic,
 Resumed his juggling cabalistic.
 The aspects here again were various;
 But seemed to indicate Aquarius.
 Thereat portentously he frowned;

Then frowned again, then smiled;—'twas
 found!

But 'twas too simple to be tried.
 "What is it, then?" at once they cried.
 "Whene'er by chance you feel incited
 To speak at length, or uninvited;
 Whene'er you feel your tones grow shrill
 (At times, we know, the softest will!),
 This word oracular, my daughter,
 Bids you to fill your mouth with water:
 Further, to hold it firm and fast,
 Until the danger be o'erpast."

The Dame, by this in part relieved
 (The prospect of escape perceived!),
 Rebelled a little at the diet.
 Cardenio said discreetly, "Try it!
 Try it, my Own! You have no choice.
 What if you lose your charming voice!"
 She tried, it seems. And since, they say,
 She talks in quite a different way.

AN INDIAN VILLAGE ON THE AMAZONS.

THE late afternoon sun shines full in our faces as we toil up the long slope that lies between the canoe-port and the village of Eréré,—a landscape singularly home-like in many of its features: ridgy meadows, with cattle browsing here and there on the young grass; richer green marking the tree-lined water-courses; outlined against the sky, a rugged mountain mass, such as one may see almost anywhere in western Massachusetts; and to the north, range after range of forest-clad hills. But before us the thatched houses of the village peep out from among orange-groves and palm-trees; and down the narrow path comes a troop of black-eyed Indian girls, with their baskets of Sunday finery balanced on their heads; they are going to Monte Alegre to attend some church festival.

Eréré is an Indian village, lying to the north of the Amazons, some forty miles below the mouth of the Tapajos. The place has been inhabited from time immemorial; probably long before Orrelana made his adventurous voyage down the river, or Caldeira founded Pará. And as the village is removed from the main lines of travel, it happens that the twenty-five or thirty families who remain here have preserved, almost unchanged, many of the aboriginal customs, and those introduced by the early Jesuit

missionaries. It is, in fact, a typical village of the semi-civilized Amazonian Indians.*

The olive-skinned lassies are crossing the brook now, splashing the water a little in fun, and greeting us with a smiling "*Adeos, Senhor*," as they pass on. Their bare feet come down firmly but softly, never minding the little round stones that cover the path; they wear clean calico skirts and modest sacks, and their uncovered purple-black hair is caught up with horn combs, or streams down their backs. *Au reste*, one or two of the faces are pretty enough, but the most are plain. An artist might object that the women were too short and heavy for beauty; but over all drawbacks of form and feature, you cannot help admiring the splendid motion of a body untrammelled by laced stays and high-heeled shoes; shoulders are thrown back, and heads are erect under their burdens; and they would march just as well if the loads were five times as heavy. These healthy limbs and supple

*I have studied these people during several years of almost constant intercourse with them, living for weeks in their villages or making long explorations with no other companions; so it will not, perhaps, be very surprising if my estimate of their character differs from that of certain steamboat travelers.



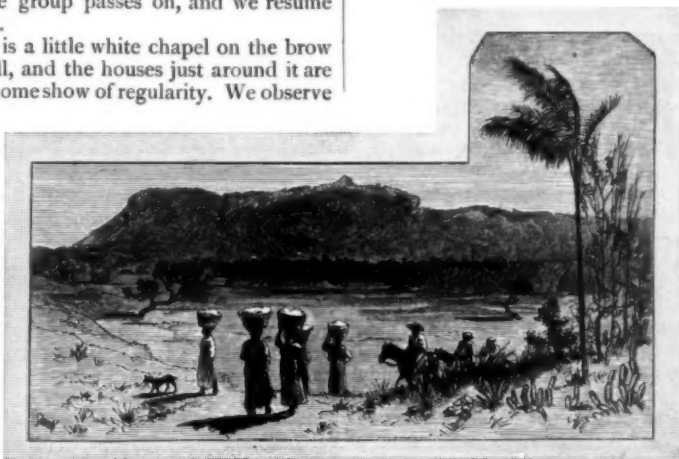
THE SAIRÉ.

bodies will bear up for hours unwearied, with the weight of a sack of flour balanced over them; aye, and the girls will dance half the night afterward!

Three or four older people in the troop are wrinkled, but not decrepit; bright-eyed, and firm-footed, greeting us very gravely and politely, and holding their place in the crowd of younger ones with a kind of patriarchal dignity. They make one or two good-natured inquiries, such as naturally arise from the apparition of a party of strange Americans on their quiet roads. Then the group passes on, and we resume our walk.

There is a little white chapel on the brow of the hill, and the houses just around it are set with some show of regularity. We observe

an attempt at a square also, but it is a side-hill affair, and all grown over with weeds. After this weak little effort toward civilization, the houses relapse into barbarism, and go straying away in picturesque confusion, hiding under the orange-groves and great bushy mango-trees as if they shunned observation. Our own quarters—the best the place affords—are in an *adobe* house near the chapel; in other words, if you please, a mud house, but with wooden doors and window shutters, and a good palm-thatch roof; no



THE APPROACH TO ERERÉ.

floor except the native earth, but that is dry and hard, and with clean mats to spread under our hammocks we shall do very well. Our baggage is lying at the canoe-landing, two miles away; half the women and girls in the village go trooping after it, willing enough to do a favor for the *Americanos*, and earn a few honest coppers in the doing; by sunset they are back again, bringing our valises and provision-cans on their heads; then, with everything under shelter, we eat our dinner of salt beef and mandioca meal with the seasoning of a hearty appetite.

At long intervals Ereré has been visited by European and American travelers. Professor Agassiz spent a day here; Wallace, Coutinho and Hartt have made the name a classic one in the literature of science. But that a lady—and an American lady at that—should bravely tramp over the weary miles of sandy *campo* from Monte Alegre, was an unheard-of thing. Even the incurious Indians are aroused, and the whole population of the village comes crowding around our doors and windows. The older girls and women enter unasked, not from any lack of politeness, but because here every door is open to any one that cares to enter, and the good people only wish to give a friendly greeting to the *branca*. Little naked boys and girls hide themselves behind their mothers' skirts, or peep in at the windows to catch a glimpse of this wonderful curiosity. At length, finding their attentions to the lady more pressing than pleasant, I order the crowd out. They go away quietly and politely, conversing with each other in subdued tones, and we retire to our hammocks and mosquito-nets. The night-wind blows in freshly through the open doors and windows, but, save a hungry dog, no intruder disturbs our rest. Among all this honest people, you will hardly find one who would so far forget the rules of hospitality as to pilfer from a stranger.

On the Amazons people rise with the sun. A bath in the river, or in the nearest spring, sets the skin in an honest, healthy glow and sharpens up the mind to appreciate the splendor of an unclouded morning. The Indians bathe always once, and often twice, a day. Even the toddling little boys and girls spatter themselves with water from a calabash. The spring at Ereré is down in a shady hollow,—a cool, verdant retreat, with noble palms and tall forest-trees and broad-leaved vines; such a combination as one sees only in these favored spots. Within a circle of

fifty yards around the spring there are no less than nine species of palms, including the noble *bacaba* and the graceful *urucury*, princes in their princely tribe, and bamboos and giant arrow-leaved *aningas*, and orchids on the branches. Bathing here is a romance,—the air is full of wind-whisperings among the leaflets and soft perfumes from the palm blossoms; emerald-tinted humming-birds—"kiss-flowers," the Brazilians say—balance themselves before the pendent blossoms; and fairy brown butterflies, just visible, flit along the ground. Indian women, coming down the path with earthen water-jars balanced on their heads, wait quietly in the forest until the *brancos* have finished their bath. Then they pass us with a "*Bons dias, senhores*," and stoop to fill their jars in the little inclosed space that is reserved for drinking-water. Half a dozen naked brown boys and girls follow, each with a round calabash-jug. They hold out their open palms for a blessing, and kiss their fingers in acknowledgment of our patriarchal "*Deos te abençoe!*" As we walk away they watch us with quick, curious eyes, but say never a word.

And now we shall learn how it is possible for men and women to live almost separated from the civilized world; how a single family can provide themselves, not only with food, but with house, furniture, utensils,—everything, in fact, but clothing and a few coarse articles of iron and steel.

Wherever we go, we will meet with nothing but kindness and unostentatious politeness. For instance, walking across the weedy plot in front of our windows, we can call on old João Baptista, the best hunter and the best fisherman in the village. João rises to meet us, offering his hand (everybody shakes hands here, even more than in the States), and inviting us to a seat on the rough wooden bench by the door. He is a little, wiry, wrinkled fellow, his face rather pleasant, though badly pitted with small-pox; the high cheek-bones and broad, but not flattened, nose are typical of the race; the mouth is a good one; the lips not too thick; the eyes bright and pleasant; the hair coarse, straight, and black as a raven's wing, albeit the man has passed his three-score years. Perhaps the Amazonian Indians may be best described by comparing them to Chinese. Indeed, the resemblance is so strong that the stray Chinamen who are sometimes seen in the river towns are commonly taken for Indians. The Amazonian race is characterized by a richer color,—not the sallow hue

of the Chinese Tartars, nor yet the coppery tint of the North American type, but a clear olive-brown, a kind of intensified *brunet*. João Baptista is dressed in coarse canvas trousers and short jacket or shirt; the cloth is stained dull red with *muruchy*. It is soiled, for this is his work-day dress; but you may be sure that it covers a clean body. The old man is busily shaping a paddle, using his clumsy knife very cleverly on the hard *itauba* wood. He converses quietly, answering our questions, and asking a few in return; but he is not talkative.

The women of the house remain at a distance, unless they are spoken to; the code of social life here does not permit them to intrude their presence on male visitors. If the lady of the party is with us, they sit by her side, curiously examining her clothing, and asking simple questions about her country,—the far-away, wonderful land which, like Rome and Paradise and Heaven, exists to them only in name. The little ones, after the universal child-greeting of extending their palms for a blessing, stand watching us silently.

Examine the structure of the house. Roughly hewn logs of *itauba* and *páo d'arco* for the uprights; set in the ground, they will last for fifty years. Beams and rafters are of other hardly less durable timbers; the joints are secured with pegs or with strips of bark. Roof and sides are covered with excellent palm-leaf thatch, tied on in regular layers, like shingles. As for floor, there is Mother Earth, with a few mats laid down under the hammocks. There are no windows, and the door-ways are closed with palm-leaf mats. So you see that the whole house is formed of materials which every Indian can gather in the forest, with no other tools than his heavy wood-knife and clumsy, straight-handled ax. Some houses have the sides built up with lumps of clay gathered from the lowland creeks; walls of this material, supported by a frame-work of poles and sticks, are durable, but very unsightly. In the larger places they cover the *adobe* with plaster, and whitewash the outside very neatly.

The dwelling does not boast much furniture. Beside the reed mats and cotton hammocks, there are only two or three benches (the boards for which have been hewn out of solid logs), and some green wooden trunks, with preposterous keys. These latter contain the *festa* dresses; the coarser work-day garments hang on lines behind the hammocks. The trunks are

rather articles of luxury than of necessity; in other houses we will see great *balaio* baskets taking their place; but every well-to-do Indian considers it incumbent on him to have a trunk, if he can get it for money or credit.



THE SPRING.

The last items of furniture are two low stools, which attract our attention by their singularity. One is made of the dry, hard skin of an alligator's breast, curved inward so that the scaled surface forms the seat and the incurled edges the feet; the other is the shell of a large terrapin, common in the neighboring woods. Under the roof there is a *geral*, or staging of poles, for mandioca baskets, dried fish, and various pots and kettles. The most of these, however, are in the little shed-like kitchen back of the house. Every Indian dwelling, no matter how poor, has its kitchen separated from the main structure. The primitive fire-place is formed of three large stones; for bellows, there is a little mat-fan, or, very likely, the puffing lungs of the brown cook. Among the articles of cuisine, we may observe an iron kettle, or a tin coffee-pot; but these are by no means necessities; most of the older women can manufacture their own cooking ware of coarse clay.

João's wife is willing enough to show us how the earthen kettles and jugs are made;

indeed, she was preparing for her potter's work when we came in; the dried balls of clay have been soaked in water overnight, and are now ready to be kneaded. A quan-

and smoothed with the corn-cob rasp and the fungus sand-paper previously wetted. When the lower part of the pot is made, it must be set in the sun to harden, so that it will



THATCH-PALM.

tity of ash from the bark of the *caripé* tree is beaten in a huge wooden mortar, and added to the clay in an earthen pan. The woman carefully kneads the two ingredients together, picking out any small lumps and sticks that she finds, until she has a mass of good stiff clay, dark in color, and very cohesive. Now she sits down on a mat with material and tools before her. These latter are: 1, spoon-shaped pieces of calabash; 2, the sharp operculum of a large river-snail (*Am-pullaria*); 3, a corn-cob; 4, a round pebble; 5, the long canine tooth of a jaguar; 6, several red fungi, leathery species, full of little pores on the under side, which serves like sand-paper for smoothing. Besides these, there is a calabash of water, and a square of board, her primitive potter's wheel. A lump of clay is carefully kneaded with the hands and pressed out flat on the board, the edges being rounded off with the fingers and the shell scraper. By turning the board before her she obtains nearly a true circle of clay; this is the bottom of the pot. Next, she forms long ropes of clay by rolling it on a board, very much as an apothecary rolls his cake for pills. The ropes are laid one over another, from the edge of the circle already formed, so as to build up the sides; each layer must be carefully pressed with the fingers upon the one below it, and at intervals the sides are shaped with the calabash spoons, scraped with the shells,

support the upper layers. Finally, the edge is turned over and finished outside with a thin roll marked with the jaguar's tooth, as a New England housewife marks the edge of her pie-crust with a key. If we come again to-morrow, we can see how the baking is done over a hot fire of *jutahy* bark; the pot is then polished with the pebble and varnished while still hot with *jutahy-seca* resin.

Besides the earthen pots and jars, other kitchen utensils are furnished by calabashes; either whole shells, the contents of which are taken out through a small hole in the top, thus forming a close jug; or the fruit cut in two to make bowls and cups, which are often covered with a brilliant black lacquer of *cumaté*, and painted in pretty patterns. There are turtle-shell pans, and gourd bottles, and wooden spoons; baskets, small and large; clay lamps for burning fish-oil, and so forth. João's wife has a few coarse plates and bowls, with knives, forks and spoons, which she has purchased in Monte Alegre; very often the plates are replaced by native earthenware, and the bowls by calabashes, and it is no unusual experience for a traveler to be reduced to the Indian eating-implements—the fingers.

The standard article of food among all the poorer classes of tropical America is the *manioc* or *mandioca* plant; wheaten bread is not more necessary to an American, or pota-



AN INDIAN HOUSE.

toes to an Irish peasant, or sago to a Malayan. Every Indian has his little plantation, and the women are occupied much of the time in preparing *farinha*.* At Ereré, the ground is too stony for cultivation; the poor folk plant their *roças* two or three miles away in the woods, and to visit them we find it better to start early in the morning, while the air is yet cool, and the dew silvers every leaf. The trail leads through a low forest, almost entirely composed of palms; there is a thick undergrowth of the stemless *curud* from which the Indians obtain their

* This must not be confounded with our *farina*, which, I believe, is a preparation from corn.

roofing-thatch; taller *urucury's* arch over the pathway; and occasionally, in wet places, there is a slender *assai*, or a giant fan-leaved *miriti*, or a pretty little *marajá-i* with the stem no bigger than one's finger. There are vistas of indescribable beauty under the roof of swaying, nodding, trembling leaflets, where the sunlight is shivered into a thousand fragments, and each fragment is in constant restless motion; where the pretty brown birds play hide-and-seek in the foliage, and brilliant gnats and dragon-flies chase the flitting patches of light. But by and by we leave the forest and come out to a mandioca field.

Indian farming is of the rudest character.



BRIC-À-BRIC IN BRAZIL.



THE GRATER.

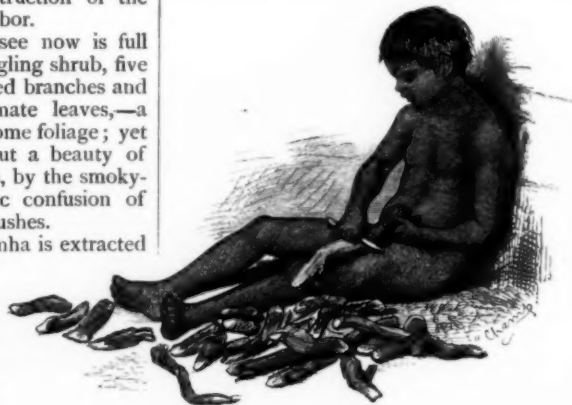
The plantation is simply an irregular clearing in the woods, with half-burned logs scattered all over the surface, so that it is difficult for us to make our way across; more than one of the party comes to grief over a hidden vine or branch. The ground has not been turned at all; as for plows, the Amazonian farmers never heard of them until they were introduced by Americans a few years ago. The mandioca cuttings are simply placed, several together, in holes dug in the unprepared ground, and they get hardly any care. As a matter of course, the top-crust, baking in the sun and drained by the strong-growing plants, is soon exhausted; every four or five years the old clearings are abandoned and new ones are made, involving fresh destruction of the forest and great outlay of labor.

The mandioca that we see now is full grown; a half-woody, straggling shrub, five or six feet high, with knotted branches and thinly set bluish-green palmate leaves,—a singular rather than a handsome foliage; yet the plantation is not without a beauty of its own, heightened, perhaps, by the smoky-bluish tint, and the chaotic confusion of plants, logs and intruding bushes.

The roots from which farinha is extracted are like a dahlia-root in shape, but much larger. When first taken from the ground they are full of a poisonous juice, and, of course, unfit for food. The process of manufacture, then, must secure two ends:

first, the extraction of this juice, and second, the separation of the nutritive principles in a form that can be preserved.

Down in a hollow of the field there are some pools of stagnant water; the unsavory odor which proceeds from one of these is caused by a mass of fermenting mandioca roots, which have lain here probably two days. This part of the process is not a pleasant one, and the girl who comes down to fill her knapsack-basket from the reeking mass in the pool excites a great deal of groundless commiseration; she only laughs to see our wry faces, and walks up the pathway with her sixty pounds of fermented roots as blithely as she would with a basket of fragrant oranges. We follow, at a distance, to the little open shed where farinha is prepared. Half a dozen women and boys are cleaning the mandioca as it is brought in; the tough outer skin is easily separated from the softened inner mass, and the roots are piled in a great wooden trough, the half of a hollowed *itauba* log; here they are grated on a board covered with sheet copper full of nail-holes. Francisca in her *fiesta* dress may be pretty; but as she stoops over the grater with a root in each hand, she affords a too-powerful reminder of that detestable northern machine—the scrubbing-board. Her bare arms and black dress are spattered with the whey-like juice; her rebellious hair is just falling away from the confining comb; her brown face, glowing with perspiration, gives the lie to our ideas of Indian laziness. Meanwhile, Miss Lizia is rubbing the grated mass through a basket-work sieve, to remove the larger fragments of woody fiber; then the mandioca is ready for the



CLEANING MANDIOCA.

next stage—straining in the *tipiti*. This is a long, narrow bag, or rather pipe, woven from strips of palm-fiber; the strips run diagonally around the bag, so that the capacity can be increased by simply forcing the ends together. When the elastic sides bulge out in this shortened condition it is filled. Now if it is hung up and drawn out forcibly, the mass within will be compressed, and the juice will run out through the interstices; in the same manner a farmer's wife strains whey from a cloth bag. To increase the pressure, a lever is passed through a loop in the lower end of the *tipiti*; a heavy stone may be attached to the lever, but our brown operator finds it more convenient to sit on the end of the pole; the juice streams out and flows into a pan arranged below.*

A small portion of the poison still remains, but it is very volatile, and will be removed by the roasting process. The *furno* on which this is done is a thick earthen pan, six feet in diameter, supported by a circle of adobe wall, with an opening on one side, so as to form a fire-place. Francisca has already kindled a fire of brushwood under the *furno*. The lumpy mandioca from the *tipiti* is broken up on the pan, and roasted with constant stirring; gradually the vile odor of the volatile juice disappears, leaving a fragrance like that of roasting corn; as the farinha dries it is spooned out into pots and baskets. The warm grains taste like the parched sweet corn that we used to prepare in the country. But the farinha will soon lose this brisk flavor, and become insipid; one's teeth, too, rebel against the hard grains. It does not appear, however, that the old farinha is positively unwholesome, and it is eaten by the poorer classes throughout Brazil; often it is stored in baskets for a year.

There are many other preparations of mandioca; as, for instance, *farinha seca*, obtained from the unfermented root, and the fine white *carimã*, farinha and tapioca together. And, as in other countries, corn, potatoes, sago, etc., have been made to yield alcoholic drinks, so these Indians make from the mandioca a beer-like liquor, which

* The starch which settles from this juice is the tapioca of commerce. The juice, boiled or fermented in the sun to extract the poison, and seasoned with red peppers, forms an excellent sauce for fish, the so-called *tucupi*.

they often use in immense quantities. From this *terubá* a very strong and crazing rum (*cauin*) is sometimes obtained by distillation; but, fortunately for the race, this is not often seen.

We wait in the shed only long enough to see the farinha packed away in baskets lined with broad tough leaves. Within a few minutes the Indians weave these open *panciro* baskets, using for material strips of the tough coating which covers the leaf-stalks of *miriti* and *caraná* palms. Our farinha-makers will not let us leave without a present; so each of us carries away a great stalk of sugarcane (the Indians plant a little in their *roças*), and half a dozen *bijú* cakes—another mandioca preparation.

These Ereré women are examples of in-



THE SEINE.

dusty. From our window we can hear, in the neighboring house, a monotonous rattat-tat, as of some one beating on a muffled drum; sometimes it comes from three or four houses at once; we hear it at all hours of the day. As we are welcome everywhere, we can follow the sound that comes through one of the low door-ways. Seated on a mat, pretty Maroca is occupied in beating a pile of cotton into long fleeces as light as thistleblows. She looks up with a smile, but does not stop her work. The cotton is laid across a large cushion; and the drumming noise that we heard was the tap of her *caraná* beating-wands on this cushion. She handles the airy mass deftly with her wands, forming it,

as it is beaten, into a many-folded pile by her side. When the pile is large enough, it must be passed again across the cushion, and so on until it has been beaten five times; then it is ready to be spun into cord. The aboriginal, and commoner, method of cord-making is with a spindle; the fleecy cotton is first slightly twisted with the fingers, and then spun by rolling the spindle between the hands. But at Ereré has been introduced a simple spinning-wheel, a noisy little affair, the clatter of which may often be heard as the old women sit by their open doors making hammock thread. Homespun clothing is no longer in vogue; even the Indians find it cheaper to purchase American and French cloths of the traders. However, Josepha will show us how the cotton is woven into coarse, serviceable hammocks. She has dyed some of the threads pale blue and yellow; these are the woof, which, with the warp of white, will form a simple check pattern. She is seated now, tailor-fashion, before the simple loom—or rather frame, for it is nothing more; every thread of the woof must be passed through the warp by hand,—a task which might appear formidable even to

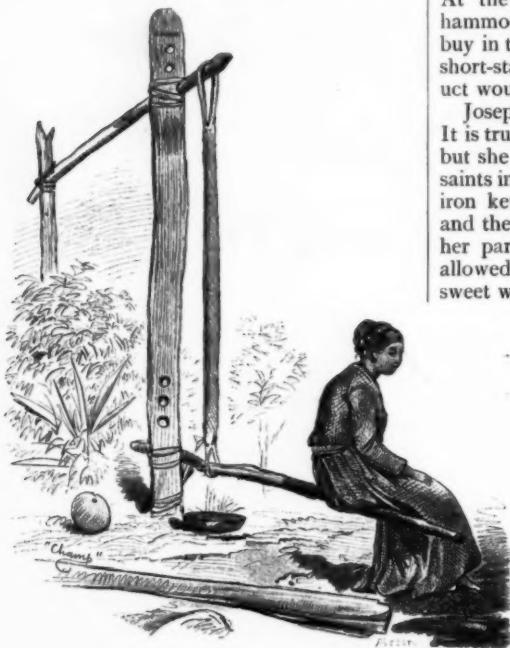


FILLING THE TIPITI.

our makers of fancy-work at home. But Josepha sits all day with her pretty, modest eyes fixed on her work, and her hands—brown, but not unshapely—cleverly tucking the thread-bobbins through the warp. At the end of a month she will have a hammock as serviceable as any she could buy in the shops, and but for the miserable short-staple cotton cultivated here, the product would be much more valuable.

Josepha is a good wife and a good mother. It is true that she knows nothing of theology, but she is devout in her way and holds the saints in reverence. It is true that her single iron kettle is scrubbed only on the inside, and there is a sitting hen in the corner of her parlor bedroom, and the tame pig is allowed to run about the house at its own sweet will; but the bright-looking children

are as clean as water will make them and their clothes are well patched. The earthen floor is carefully swept, and the space around the house is kept free from weeds and bushes. Probably she is not legally bound to her partner, for marriage among the younger Indians is not common, partly because it is considered unnecessary, principally, I think, owing to the expense, ten or fifteen dollars being a heavy burden to these improvident people. But Josepha's man is a steady, hard-working fellow, and very fond of her and the chil-



STRAINING THE MANDIOCA.

dren, so it is not likely that they will ever be separated. The wonder is that these half-civilized people have come so near the high ideal of marriage. Their code of morality is certainly superior to that which holds among other classes on the Amazons. It is true that the younger women are inclined to be flighty, and you may see them with children which "have no father," so they say; but later in life they grow steady and are very faithful to their legal or *de facto* husbands.

Child-life here is an exceedingly curious study; the little quiet creatures are so different from our romping American boys and girls. They get few caresses and give none; mother-love is mechanical; there is nothing of that overflow of tenderness, that constant watchful care, that sheds such

traits of the race appear even in the young babies. If a plaything is given them, they examine it gravely for a little while, and then let it drop. Observe how different this is from a white baby's actions. A bright little six-months-old at home has four distinct methods of investigation: first, by looking; second, by touching; then by putting the object in its mouth; and finally by banging it against the floor. The brown *menino* just looks; he does not investigate at all. As the children grow older, the same trait is apparent in almost every case. An Indian is content to see or hear a thing, without troubling himself about the whys and wherefores; even such incomprehensible pursuits as fossil-collecting, or butterfly-catching, or sketching, provoke hardly any curiosity.



ROASTING FARINHA.

a halo around our homes. The babies vegetate in their steady brown fashion, seldom crying or laughing, but lying all day in their hammock cradles and watching everything around them with keen eyes. As soon as the little boys and girls can toddle about they are left pretty much to their own resources, tumbling up the back stairs of life on a diet of mandioca meal and fish. The parents seldom punish their children, for they are very docile; when they do, the little ones pucker up their mouths and look sullen, but do not cry. Pleasure is expressed by a smile,—among the little girls very often by a broad grin, with abundant show of teeth,—but an articulate laugh is a rarity.

It is interesting to watch how the mental

The people look on quietly, sometimes asking a question or two, but soon dismissing the subject from their minds as something they are incapable of understanding. With all the crowding to see the lady of our party, hardly a person asked why she came. So, too, the babies are unambitious; they do not cry after pretty colors, or stretch out their hands to a candle. And the men have no apparent desire to better their lot. They go on just as their fathers did; submit to the impositions of the whites, a little sullenly, but without a thought of rebellion, unless there is a white or a half-breed to lead them. The children do not care much for playthings; we rarely see one with a rag doll; the little boys delight in bows and



INDIAN WOMAN BEATING COTTON.

arrows, but they take them as a part of their training. Sometimes the people have dances, in imitation of the *festa* sports; and we hear them humming the waltzes and quadrilles which their quick ears have caught from the musicians. As an Indian will paddle steadily all day, while his wife at home



WEAVING PANEIRO BASKETS.

hardly ceases her monotonous cotton-beating, so the little ones have an inexhaustible gift of patience. Where a white child would fret and cry, the brown one sits all day, perfectly still, but watching everything around him. To see a little Indian boy in a canoe, you

would say that nothing of him was alive but his eyes.

Most of the boys get a little schooling, after the prevalent fashion here: *i. e.*, about an equal amount of dry text-book* and smarting ferule. However, they are bright students, and soon learn to read and write the easy Portuguese language. Sometimes the children are taken into white families, where they do very well at first; but as they grow older they become impatient of restraint, and dream moodily of their native wilds. So it generally happens that the boys embark in a trading or fishing canoe, and the girls elope with some admirer to parts unknown. The Brazilians complain loudly of this ingratitude. "After having had all the care and trouble of bringing up the children," they say, "we are deserted just when their services become valuable." It must be confessed that there is much reason for this complaint; but I think that the unfaithfulness of their wards is to be attributed less to any positive badness of character, than to the childishness which remembers only the present, and forgets a past kindness.

* No wonder that the Amazonian boys have so poor an idea of geography—in all their school books there is not a single map.

This childishness is shown, also, in the ease with which the Indians bear the loss of friends and relatives. I remember a striking instance. I had been living for some time in an Indian house; it was of the better class, and occupied by a steady-going young man and his family. One of the women had a sickly baby, not more than three months old. The tiny thing required much care, and the

night there was an Indian ball near by, and I saw this mother, so lately bereaved, taking part, all smiles, in the merriment. I confess I was shocked at first; but then her grief in the morning was unfeigned, and there can be no doubt that she would have stayed away from the dance for a living child, though she did not for the dead one. It was simply the half-savage, childish nat-



MAKING HAMMOCK-THREAD.

mother paid more attention to it than a healthier child would have received. She never left it long; if at work in the field she would come to the house every hour or two, to take it from its girl-cousin, though the latter, for an eight-year-old, was an excellent nurse. One morning the baby sickened, and lay moaning weakly for a few hours, until it died. There were no religious rites, except that, as the custom is, the child had been baptized just before its death. The mother laid the little child on a mat, and folded the thin fingers together, with a white flower or two on the body; it was all she could do, for they were too poor to afford a funeral. But she sat looking at it, with the tears—which she vainly tried to conceal—rolling down her brown cheeks and falling on the little upturned face. Presently she turned away, and the men took the body out and buried it in the deep forest. That

ure,—to grieve only at the moment of a loss, and then forget all about it.

The Indians may be unfaithful to their white masters, but in their own circles they always retain a reverential love for their parents, and as they grow older take them under their care. At Eréré we often notice the beautiful respect which age inspires. Many a touching picture one sees: a gray-haired patriarch, sitting before his door in the crimson sunset, and gravely giving his hand to be kissed by sons and daughters who come to honor him; village children stretching out their palms for blessings from a passing old man; young Indians bringing offerings of fish and fruit to decrepit old women, who have been left destitute, and are obliged to subsist thus on the willing charity of their neighbors.

Of moonlit evenings the old people sit before their doors until near midnight, while

the younger ones stroll around from house to house, gossiping with their neighbors, and carrying on sly flirtations under the orange-trees. Our own house is quite a center of attraction; the women come three or four together, to pay their respects to the *branca* and bring her presents of fruit, sugar-cane, a little fresh meat, and so on; they are well satisfied when they get a few soda-crackers in exchange.

mortars, to frighten away the evil spirit. It may be for some other purpose; they are not sure; they only know that their fathers succeeded in getting rid of the eclipse by making a noise; there is the plain fact that the moon became full again soon after the beating began, and it would be folly to neglect an observance so efficacious.

I think that the Indians keep up their religious observances very much in the same



HAMMOCK-WEAVING.

One evening C—— and I are seated before the door watching a partial eclipse of the moon which is taking place; suddenly a drum-like noise comes from some distant house; immediately a gun is fired, and from another place a rocket goes whizzing over the trees. This is a relic of the aboriginal superstitions. The old Tupis supposed that the life of the moon was like that of a man; beginning very thin and small, he eats and grows until he is full and round; then comes his period of decrepitude, he is weak and thin:

“His youthful hose well saved, a world too wide
For his shrunk shank,”

until he dies and gives place to another moon. But our friend João Baptista says the moon has not had enough to eat to-day, some demon has stolen his farinha, and he goes half starved. “It was the belief of the ancients,” says João; “people nowadays know better.” But nevertheless they are firing guns, and beating on wooden

spirit. They have no definite theology; their religion is rather a vague and undefined awe of a higher power, which they all acknowledge but do not seek to understand. It is true that they are nominally members of the Catholic church; but they show very little interest in the ceremonies; their own Christianity is confined to a few simple observances and they do not even clearly understand the import of these. Each year there is a grand festival in honor of the patron saint. For two or three weeks before, the little chapel is lighted up every evening, and the people gather to a kind of singing prayer-meeting; the women kneeling devoutly on the earthen floor while three men, before the little shrine, lead them in their simple chants. All the villagers know these hymns by heart; they have very sweet and clear, though untrained, voices; certainly we have heard worse singing in a country church at home. And what if the women are dressed in calico, and the men standing around the

door are coatless and barefooted; the little crowd has the true spirit of devotion, though there is not one, perhaps, who could tell you whether they are worshiping the wooden saint in the shrine or a spiritual saint in the sky. The men kneel with the women to repeat the Lord's Prayer; then all go up to kiss the saint's girdle and leave their contributions—a few coppers to purchase sugar and rum for the *festa*. After that they adjourn to a neighboring house and spend an hour or two in dancing.

The grand festival begins on Saturday evening. During the day parties have been coming in from all directions, bringing their *roupa de ver a Deus*—"clothes to see God in"—on their heads. Every house is crowded with guests, and many swing their hammocks to the trees; the old women busy themselves in preparing sweetmeats and mandioca beer; and the men build an arbor of boughs before the chapel. Everybody attends the final prayer-meeting, and devoutly salutes the saint; then the dancing begins in several houses at once and is continued with very little intermission until Tuesday or Wednesday, as the refreshments last. Many of the young people get only five or six hours of sleep during this time. The dancers are orderly, and for the most part sober; the old people sit around and watch them, and grow talkative, and enjoy themselves quietly; and white clerks from town move about with a pleasing sense of their own glory. On Sunday morning there is an interlude, during which the grand breakfast is served. An ox has been killed for the occasion, and the guests eat as much as they please, with their fingers for forks. Ceremonious toasts are proposed in bad Portuguese and drunk in bad wine; everybody says "*Viva!*" in acknowledgment of everybody's sentiments, and there is a solemn aping of all that is ridiculous in the grand dinners of the *brancos*. With this the Indians feel that they have done their duty, and return to their sports with fresh unction. They dance rustic waltzes and quadrilles, not ungracefully, to the music of a violin and a little wire-stringed guitar. Then there is the favorite *tundú*, a kind of slow fandango, involving much snapping of fingers and shuffling of feet. The *saracura* dance is led off by a special musician, a merry old fellow, who marches about the room playing a tiny reed flute with the right hand and beating a drum with the left. One after another the couples fall in behind him, tripping along with their arms about

each other very lovingly, and keeping time to his music with a little jingling song, which, in English, would be something like this:

"I swang in my drowsy hammock
And wooed the forest boughs;
But they answered low, 'There's pain and woe
In the lover's foolish vows.'

"Little fish in the deep, dark pool,
Fickle sand of the sea,
How can I ever love you alone,
Since you will not alone love me?

"What if I drift away, away,
Alone on the ocean swell;
What if I die with no one nigh
Of the friends who love me well?

"Yet I have the sun for my lover true,
The moon for my lady bright,
The sun to walk with alone all day,
The moon in the silent night."



AN INDIAN MOTHER.

Sometimes the dance is varied with figures, forming a circle, advancing to the center, retreating to the ring again, and so on. It is simple, but very pretty.

On Sunday evening, the old women take

their turn with the *sairé*, a ceremony invented or adapted by the early Jesuit missionaries. The women pass from house to

weirdness from the flaring oil lamps and the dark faces around. The song—a hymn in praise of the Virgin—is in the Indian language (*lingua-geral*), which is hardly understood now except by the old people. These women have their heads crammed full of the aboriginal superstitions. They will tell hobgoblin stories by the hour, sitting in the fire-light and hugging their knees with shriveled arms until you think of witches, and half believe their myths.



TITITIRA CAVE.

house, two of them in front carrying an arched frame, surmounted by a cross and prettily trimmed. A ribbon attached to the cross is held by a third woman, who always walks behind. Invited in, the performers seat themselves on a mat, and are served with rum and sweetmeats, in respectful silence. Presently they rise and begin a monotonous chant, keeping time to the slow beating of a drum. Now they take three steps forward and three back, the two in front waving the frame before their faces, and the one behind following their movements and holding the ribbon above her head. The ceremony goes on in this way for half an hour, with pauses at intervals. The old women hold themselves with a sedateness befitting their important office, gathering a touch of

Sometimes, in our wanderings about the Serra and the plains, our guide points out the haunts of these spirits. We climb to the *Tititira* cave, and frighten out the bats, and imagine big snakes in the crevices around; but the *Tititira* does not come to scare us with horrid noises and strike us with invisible hands. In the forest we hear of the *curupira*, a bald-headed dwarf with feet turned backward, so that those who see his tracks and try to avoid him will only run to their own destruction; he entices hunters away by imitating the call of a *mutum* or a partridge; then, when they have lost themselves in the thick woods, he kills them and tears out their hearts and livers, and makes an unctuous meal.

But we must leave Ereré in the mellow sunshine. Farewell, honest, simple-hearted people! Farewell, nodding palms and shady orange-groves and woodland paths! The sunshine lies yet over the distant houses and tiny white chapel, but we carry away a little of it in happy memories of this quiet spot.

THE SPHINX.

[WRITTEN FOR THE SEMI-CENTENNIAL CELEBRATION AT ABBOTT ACADEMY, ANDOVER.]

Oh, glad girls' faces, hushed and fair! how shall I sing for ye?
For the grave picture of a Sphinx is all that I can see.

Vain is the driving of the sand, and vain the desert's art;
The years strive with her, but she holds the lion in her heart.

Baffled or fostered, patient still, the perfect purpose clings;
Flying or folded, strong as stone, she wears the eagle's wings.

Eastward she looks; against the sky the eternal morning lies;
Silent or pleading, veiled or free, she lifts the woman's eyes.

Oh, grave girls' faces, listening, kind! glad will I sing for ye,
While the proud figure of the Sphinx is all that I can see.

"HAWORTH'S." *

BY FRANCES HODGSON BURNETT,

Author of "That Lass o' Lowrie's," "Surly Tim, and Other Stories," Etc.

CHAPTER XLI.

"IT HAS ALL BEEN A LIE."

IN a week's time Saint Méran had become a distinct element in the social atmosphere of Broxton and vicinity. He fell into his place at Rachel Ffrench's side with the naturalness of a man who felt he had some slight claim upon his position. He was her father's guest; they had seen a great deal of each other abroad. Any

hot water. He drove the work on and tyrannized over the hands from foremen to puddlers. At such times there was mysterious and covert rebellion and some sharp guessing as to what was going on, but it generally ended in this. Upon the whole the men were used to being bullied, and some of them worked the better for it.

Murdoch went about his work as usual, though there was not a decent man on the place who did not gradually awaken to the



"MURDOCH WENT ABOUT HIS WORK AS USUAL."

woman might have felt his well-bred homage a delicate compliment. He was received as an agreeable addition to society; he attended her upon all occasions. From the window of his work-room Murdoch saw him drive by with her in her carriage, saw him drop into the bank for a friendly chat with Ffrench, who regarded him with a mixture of nervousness and admiration.

Haworth, having gone away again, had not heard of him. Of late the Works had seen little of its master. He made journeys hither and thither, and on his return from such journeys invariably kept the place in

fact that some singular change was at work upon him. He concentrated all his mental powers upon what he had to do during work hours, and so held himself in check, but he spent all his leisure in a kind of apathy, sitting in his cell at his work-table in his old posture, his forehead supported by his hands, his fingers locked in his tumbled hair. Sometimes he was seized with fits of nervous trembling which left him weak. When he left home in the morning he did not return until night and he ate no midday meal.

As yet he was only drifting here and

there; he had arrived at no conclusions; he did not believe in his own reasoning; the first blow had simply stunned him. A man who had been less reserved and who had begun upon a fair foundation of common knowledge would have understood; he understood nothing but his passion, his past rapture, and that a mysterious shock had fallen upon him.

it was—but it may have been. Perhaps I expected too much." And he went out.

After he had been absent some minutes, Ffrench came in from the bank. He had been having a hard morning of it. The few apparently unimportant indiscretions in the way of private speculation of which he had been guilty were beginning to present themselves in divers unpleasant forms, and to as-



"SHE WENT TO THE TABLE AT HIS SIDE."

He lived in this way for more than a week, and then he roused himself to make a struggle. One bright, sunny day, after sitting dumbly for half an hour or so, he staggered to his feet and took up his hat.

"I'll—try—again," he said, mechanically.

"I'll try again. I don't know what it means. It may have been my fault. I don't think

sume an air of importance he had not believed possible. His best ventures had failed him and things which he was extremely anxious to keep from Haworth's ears were assuming a shape which would render it difficult to manage them privately. He was badgered and baited on all sides, and naturally began to see his own folly.

His greatest fear was not so much that he should lose the money he had risked as that Haworth should discover his luckless weakness and confront and crush him with it. As he stood in fear of his daughter, so he stood in fear of Haworth; but his dread of Haworth was, perhaps, the stronger feeling of the two. His very refinement added to it. Having gained the object of his ambition, he had found it not exactly what he had pictured it. Haworth had not spared him, the very hands had derided his enthusiastic and strenuous efforts; he had secretly felt that his position was ridiculous, and provocative of satire among the unscientific herd. When he had done anything which should have brought him success and helped him to assert himself, it had somehow always failed, and now —

He sat down in the managerial chair before Haworth's great table, strewn with papers and bills. He had shut the door behind him and was glad to be alone.

"I am extremely unfortunate," he faltered aloud. "I don't know how to account for it." And he glanced about him helplessly. Before the words had fairly left his lips his privacy was broken in upon. The door was flung open and Murdoch came in. He had evidently walked fast, for he was breathing heavily, and he had plainly expected to find the room empty. He looked at Ffrench, sat down and wiped his lips.

"I want you," he began, with labored articulation, "I want you—to tell me—what—I have done."

Ffrench could only stare at him.

"I went to the house," he said, "and asked for her." (He did not say for whom, nor was it necessary that he should. Ffrench understood him perfectly). "I swear I saw her standing at the window as I went up the path. She had a purple dress on—and a white flower in her hair—and Saint Méran was at her side. Before, the man at the door never waited for me to speak; this time he stood and looked at me. I said, 'I want to see Miss Ffrench'; he answered, 'She is not at home.' 'Not at home,'—breaking into a rough laugh,—'not at home' to me!"

He clinched his fist and dashed it against the chair.

"What does it mean?" he cried out. "What does it mean?"

Ffrench quaked.

"I—I don't know," he answered, and his own face gave him the lie.

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Murdoch caught his words up and flung them back at him.

"You don't know!" he cried. "Then I will tell you. It means that she has been playing me false from first to last."

Ffrench felt his position becoming weaker and weaker. Here was a state of affairs he had never seen before; here was a madness which concealed nothing, which defied all, which flung all social presuppositions to the winds. He ought to have been able to palter and equivocate, to profess well-bred surprise and some delicate indignation, to be dignified and subtle; but he was not. He could only sit and wonder what would come next, and feel uncomfortable and alarmed. The thing which came next he had not expected any more than he had expected the rest of the outbreak.

Suddenly a sullen calmness settled upon the young fellow—a calm which spoke of some fierce determination.

"I don't know why I should have broken out like this before you," he said. "Seeing you here when I expected to fight it out alone, surprised me into it. But there is one thing I am going to do. I'll hear the truth from her own lips. When you go home I will go with you. They won't turn me back then, and I'll see her face to face."

"I——" began French, and then added, completely overwhelmed, "Very—perhaps it would be—be best."

"Best!" echoed Murdoch, with another laugh. "No, it won't be best; it will be worst; but I'll do it for all that."

And he dropped his head upon the arms he had folded on the chair's back, and so sat in a forlorn, comfortless posture, not speaking, not stirring, as if he did not know that there was any presence in the room but his own.

And he kept his word. As Ffrench was going out into the street at dusk he felt a touch on his shoulder, and turning, found Murdoch close behind him.

"I'm ready," he said, "if you are."

When they reached the house, the man who opened the door stared at them blankly, which so irritated Ffrench that he found an excuse for administering a sharp rebuke to him about some trifle.

"They are always making some stupid blunder," he said to Murdoch as they passed upstairs to the drawing-room.

But Murdoch did not hear.

It was one of the occasions on which Rachel Ffrench reached her highest point

of beauty. Her black velvet dress was almost severe in its simplicity, and her one ornament was the jeweled star in her high *coiffure*. M. Saint Méran held his place at her side. He received Murdoch with *empressement* and exhibited much tact and good feeling. But Murdoch would have none of him. He had neither tact nor experience.

His time did not come until the evening was nearly over, and it would never have come if he had not at last forced her to confront him by making his way to her side with a daring which was so novel in him that it would have mastered another woman.

Near her he trembled a little, but he said what he had come to say.

"To-day," he said, "when I called—your servant told me you were not at home."

She paused a moment before answering, but when she did answer he trembled no more.

"That was unfortunate," she said.

"It was not true—I saw you at the window."

She looked him quietly in the face, answering him in two words.

"Did you?"

He turned on his heel and walked away. His brain whirled; he did not know how he got out of the room. He was scarcely conscious of existence until he found himself out-of-doors. He got beyond the gate and into the road and to the end of the road, but there he stopped and turned back. He went back until he found he was opposite the house again, looking up at the lighted window, he did not know why. A sharp rain was falling, but he did not feel it. He stood staring at the window, mechanically plucking at the leaves on the hedge near him. He scarcely knew whether it was a curse or a sob which fell from his lips and awakened him at last.

"Am I going mad?" he said. "Do men go mad through such things? God forbid—if there is a God! It has all been a lie—a lie—a lie!!"

CHAPTER XLII.

"ANOTHER MAN!"

IN two days Haworth returned. He came from the station one morning, not having been home. He did not go to the Works, but to the bank and straight into Ffrench's private room.

The look this unhappy gentleman gave

him when he saw him was a queer mixture of anxiety, furtive query, and amiably frank welcome,—the frank welcome a very faint element indeed, though it was brought to light by a violent effort. Haworth shut the door and locked it, and then turned upon him, his face black with rage.

"Say summat!" he ground out through his teeth. "Say summat as'll keep me from smashing every bone in your body!"

Ffrench gave him one hopeless glance and wilted into a drooping, weakly protesting, humiliated figure.

"Don't—don't be so severe, Haworth," he said. "I—I——"

"Blast you!" burst in Haworth, pitilessly. "You've ruined me!"

He spoke under his breath. No one in the room beyond could hear a word, but it was a thousand times more terrible than if he had roared at the top of his voice, as was his custom when things went amiss.

"You've ruined me!" he repeated.

"You! A chap that's played gentleman manufacturer; a chap I've laughed at; a chap I took in to serve my own ends—ruined me, by——"

"Oh, no, no!" the culprit cried out.

"My dear fellow, no! No, no!"

Haworth strode up to him and struck his fist against the table.

"Have I ever told you a word of what was going on?" he demanded.

"No! No!"

"Have I ever let you be aught but what I swore you should be at th' first—a fellow to play second fiddle and do what he was told?"

Ffrench turned pale. A less hard nature would have felt more sympathy for him.

"No," he answered, "you have not," and his chin dropped on his breast.

Haworth shook his fist in his face. He was in a frenzy of rage and despair.

"It's been going from bad to worse for six months," he said; "but you were not up to seeing it stare you in the face. Strikes are the things for trade to thrive on! One place after another gone down and Jem Haworth's stood up. Jem Haworth's out-done 'em all. I've not slept for three months, my lad. I've fought it like a tiger! I've not left a stone unturned. I've held my mouth shut and my eyes open,—aye, and held my breath, too. I've sworn every time I saw daylight that I'd hold it out to the end and show 'em all what Haworth was made of, and how he stood when th' nobs went down at the first drive. I'd sooner

have hell than what's bound to come now! And it's you that's done it. You've lost me twenty thousand pound—twenty thousand, when ten's worth more to me than a hundred was a twelvemonth since!"

Ffrench quailed like a woman.

"Are—are you going to murder me?" he said. "You look as if you were."

Haworth turned on his heel.

"You're not worth it," he answered, "or I'd do it, by the Lord Harry."

Then he came back to him.

"I've paid enow for what I've never had, by George," he said, with bitter grimness.

"For what you have —" Ffrench began.

Haworth stopped him by flinging himself down in a chair near him—so near that their faces were brought within uncomfortably close range of each other. There was no avoiding his eye.

"You know what," he sneered. "None better."

"I —" Ffrench faltered.

"Blast you!" said Haworth. "You played her like bait to a fish—in your gentleman's fashion."

Ffrench felt a little sick. It was not unnatural that he should. A man of refined instincts likes less than any other man to be confronted brutally with the fact that he has, however delicately, tampered with a coarseness.

Haworth went on.

"You knew how to do it, and you did it—gentleman way. You knew me and you knew I was hard hit and you knew I'd make a big throw. That was between us two, though we never said a word. I'd never give up a thing in my life before and I was mad for her. She knew how to hold me off and gave me plenty to think of. What else had you, my lad? 'Haworth's' didn't want a gentleman; 'Haworth's' didn't want brass, and you'd none to give if it did. It wasn't *you* who was took in partner; it was what Jem Haworth was aiming at—and has missed, by —"

He got up, and, pushing his chair back, made a stride toward the door. Ffrench was sure he was going away without another word, but he suddenly stopped and turned back.

"I'd sooner take hell than what's comin'," he repeated in a hoarse whisper. "And it's you that's brought it on me; but if I'd got what I aimed at, it might have come and welcome."

Then he went out.

He went across to the Works, and, going into his room, he found Murdoch standing at one of the windows gazing out at something in the street. He was haggard and gaunt and had a vacant look. It occurred to Haworth that some sudden physical ailment had attacked him. He went up to his side.

"What have you found, lad?" he demanded.

The next instant his own eyes discovered what it was. An open carriage was just drawing up before the bank. Rachel Ffrench sat in it and Saint Méran was with her.

He looked at them a second or so and then looked at Murdoch—at his wretched face and his hollow eyes. An unsavory exclamation burst from him.

"What!" he cried out after it. "There's another man, is there? Is it *that*?"

"Yes," was Murdoch's monotonous reply. "There's another man."

CHAPTER XLIII.

"EVEN."

THE same evening M. Saint Méran had the pleasure of meeting a person of whom he had heard much, and in whom he was greatly interested. This person was the master of "Haworth's," who came in after dinner.

If he had found Murdoch a little trying and wearisome, M. Saint Méran found Haworth astounding. He was not at all prepared for him. When he walked into the room as if it were his own, gave a bare half-nod to Ffrench, and carried himself aggressively to Miss Ffrench's side, Saint Méran was transfixed with astonishment. He had heard faint rumors of something like this before, but had never dreamed of seeing it. He retreated within himself and occupied himself with a study of the manners and characteristics of the successful manufacturers of Great Britain.

"He is very large," he said, with soft sarcasm, to Miss Ffrench. "Very large indeed."

"That," replied Miss Ffrench, "is probably the result of the iron trade."

The truth was that he seemed to fill the room. The time had passed when he was ill at ease in the house. Now he was cool to defiance. Ffrench had never found him so embarrassing as he was upon this particular evening. He spoke very little, sitting in his chair silent, with a gloomy and brooding look. When he directed his attention upon any one, it was upon Rachel. The

prolonged gaze which he occasionally fixed upon her was one of evil scrutiny, which stirred her usually cool blood not a little. She never failed, however, to meet it with composure. At last she did a daring thing. Under cover of a conversation between her father and Saint Méran, she went to the table at his side and began to turn over the books upon it.

"I think," she said, in an undertone, "that you have something to say to me."

"Aye," he answered, "I have that, and the time 'll come when I shall say it, too."

"You think I am afraid to hear it," she continued. "Follow me into the next room and see."

Then she addressed her father, speaking aloud.

"Your plans for the new bank are in the next room, I believe," she said. "I wish to show them to Mr. Haworth."

"Y—yes," he admitted, somewhat reluctantly. "They are on my table."

She passed through the folding doors and Haworth followed her. She stopped at one of the windows and waited for him to speak, and it was during this moment in which she waited that he saw in her face what he had not seen before—a faint pallor and a change which was not so much a real change as the foreshadowing of one to come. He saw it now because it chanced that the light struck full upon her.

"Now," she said, "say your say. But let me tell you that I shall listen not because I feel a shadow of interest in it, but because I *know* you thought I shrank from hearing it."

He pushed open the French window and strode on to the terrace.

"Step out here," he said.

She went out.

"This," he said, glancing about him, "this is th' place you stood on th' night you showed yourself to the strikers."

She made no answer.

"It's as good a place as any," he went on. "I'm going to have it out with you," he said, with bitter significance.

Then, for the first time, it struck her that she had overstepped the mark and done a dangerous thing, but she would have borne a great deal sooner than turn back, and so she remained.

"I've stood it a long time," he said, "and now I'm going to reckon up. There's a good bit of reckoning up to be done betwixt you and me, for all you've held me at arm's length."

"I am glad," she put in, "that you acknowledge that I did hold you at arm's length and that you were not blind to it."

"Oh," he answered, "I wasn't blind to it, no more than you were blind to the other; and from first to last it's been my comfort to remember that you weren't blind to the other—that you knew it as well as I did. I've held to that."

He came close to her.

"When I give up what I'd worked twenty year to get, what did I give it up for? For *you*. When I took Ffrench in partner, what did I run the risk for? For *you*. What was to pay me? *You*."

His close presence in the shadow was so intolerable to her that she could have cried out, but she did not.

"You made a poor bargain," she remarked.

"Aye, a poor bargain; but you were one in it. You bore it in your mind, and you've bore it there from then till now, and I've got a hold on you through it that's worth summat to me, if I never came nigh nor touched you. You knew it, and you let it be. No other chap can pay more for you than Jem Haworth's paid. I've got that to think of."

She made a gesture with her hand.

"I—I—hush!" she cried. "I will not hear it!"

"Stop it, if you can. Call 'em if you want, and let 'em hear—th' new chap and all. You shall hear, if all Broxton comes. I've paid twenty-five year of work and sweat and grime; I've paid 'Haworth's'—for I'm a ruined chap as I stand here; and but for *you* I'd have got through."

There was a shock in these last words; if they were true the blow would fall on her too.

"What," she faltered,— "what do you mean?"

"Th' strikes begun it," he answered, laconically, "and," with a jerk of his thumb toward the room in which her father sat, "he finished it. He tried some of his gentleman pranks in a quiet way, and he lost money on 'em. He's lost it again and again, and tried to cover it with fresh shifts, and it's 'Haworth's' that must pay for 'em. It'll come sooner or later, and you may make up your mind to it."

"What were you doing?" she demanded, sharply. "You might have known—"

"Aye," he returned, "what was I doing? I used to be a sharp chap enow. I've not been as sharp i' th' last twelvemonth,

and he was up to it. He thought it was his own brass, likely—he'd give summat for it as belonged to him."

He came nearer to the light and eyed her over.

"You've had your day," he said. "You've made a worse chap of me than I need have been. You—you lost me a friend; I hadn't counted that in. You've done worse by him than you've done by me. He was th' finer mak' of th' two, and it'll go harder with him. When I came in, he was hanging about the road-side, looking up at the house. He didn't see me, but I saw him. He'll be there many a night, I dare say. I'd be ready to swear he's there now."

"Whom do you mean?"

"I mean—Murdoch!"

The very sound of his own voice seemed to fire him with rage. She saw a look in his eye which caused her to shrink back. But she was too late. He caught her by the arm and dragged her toward him.

A second later when he released her, she staggered to one of the rustic seats and sank crouching into it, hiding her face in the folds of her dress. She had not cried out, however, or uttered a sound, and he had known she would not.

He stood looking down at her.

"A gentleman wouldn't have done it," he said, hoarsely. "I'm not a gentleman. You've held me off and trampled me under foot. That'll leave us a bit even."

And he turned on his heel and walked away into the darkness.

CHAPTER XLIV.

"WHY DO YOU CRY FOR ME?"

WHEN he said that he had seen Murdoch standing in the road before the house, he had spoken the truth. It was also true that even as they stood upon the terrace he was there still.

He was there every night. Where he slept or when, or if at all, his mother and Christian did not know; they only knew that he never spent a night at home. They barely saw him from day to day. When he came home in the morning and evening, it was to sit at the table, rarely speaking, scarcely tasting food, only drinking greedily the cup of strong coffee Christian always had in readiness for him. The girl was very good to him in these days. She watched him in terror of his unnatural mood. He hardly seemed to see them when they were in the room with him;

his eyes were hollow and burning bright; he grew thin and narrow-chested and stooped; his hands were unsteady when he lifted anything.

When she was alone, Christian said to herself again and again:

"He will die. There is no help for it. He will die—or worse."

One morning she came down to find him lying on the sofa with closed eyes and such a deathly face that she almost cried out aloud. But she restrained herself and went into the kitchen as if to perform her usual tasks. Not long afterward she returned carrying a little tray with a cup of hot coffee upon it.

"Will you drink this for me?" she said to him.

He opened his eyes a little impatiently, but he sat up and drank it.

"It's very good," he said, as he fell back again into his old position, "but you mustn't put yourself to trouble for me."

Afterward the coffee was always ready for him when he came in and he got into the habit of drinking it mechanically.

The books he had been accustomed to pore over at every leisure moment lay unopened. He neither touched nor looked at them.

The two women tried to live their lives as if nothing were happening. They studiously avoided questioning or appearing to observe him.

"We must not let him think that we talk of him," Christian said.

She showed a wonderful gentleness and tact. Until long afterward, Mrs. Murdoch scarcely knew what support and comfort she had in her. Her past life had planted in her a readiness to despair.

"He is like his father," she said once. "He was like him as a child. He is very trusting and faithful, but when his belief is gone it is all over. He has given up as his father did before he died. He will not try to live."

He did not try to live, but he did not think of death. He was too full of other morbid thoughts. He could not follow any idea far. A thousand of them came and went and in the end were as nothing.

"Why," he kept saying to himself weakly and wearily,—"*why* was it? What had I done? It was a strange thing to choose me out of so many. I was hardly worth it. To have chosen another man would have served her better."

He did not know how the days passed at

the Works. The men began to gaze at him askance and mutter when he went by.

"Th' feyther went daft," they said. "Is this chap goin' th' same way?"

It was only the look of his face which made them say so. He got through his work one way or another. But the days were his dread. The nights, strange and dreadful enough, were better than the broad daylight, with the scores of hands about him and the clangor of hammers and whir of machinery. He fell into the habit of going to the engine-room and standing staring at the engine, fascinated by it. Once he drew nearer and nearer with such a look in his eye that Floxham began to regard him stealthily. He went closer, pace by pace, and at last made a step which brought a shout from Floxham, who sprang upon him and tore him away.

"What art at, tha foo'?" he yelled. "Does tha want to go whoam on a shutter?"

Wakening, with a long breath, he said:

"I forgot that was it. I was thinking of another thing."

The time came at length when he had altered so that when he went out his mother and Christian often sat up together half the night trembling with a fear neither of them would have put into words. As they sat trying to talk, each would glance at the other stealthily, and when their eyes met, each would start as if with some guilty thought.

On one of the worst and most dreadful of nights, Christian suddenly rose from her seat, crossed the hearth and threw herself upon her knees before her companion.

"I am going out," she said. "Don't—don't try to keep me."

"It is midnight," said Mrs. Murdoch, "and—you don't know where to go."

"Yes," the girl returned, "I do. For God's sake, let me go! I cannot bear it."

The woman gave her a long look, and then said a strange and cruel thing.

"You had better stay where you are. It is not *you* he wants."

"No," she said bitterly, "it is not I he wants; but I can find him and make sure—that—he will come back. And then you will go to sleep." She left her in spite of her efforts to detain her. She was utterly fearless, and went into the night as if there was no such thing as peril on earth.

She did know where to go and went there. Murdoch was standing opposite the house in which Rachel Ffrench slept. She went to him and put her hand on his arm.

"What are you doing here?" she said, in

a low voice. He turned and gave her a cold, vacant look. He did not seem at all surprised at finding her dark, beautiful young face at his very shoulder.

"I don't know. Can you tell me?"

"We have been waiting for you," she said. "We cannot rest when you are away."

"Do you want me to go home and go to bed decently and sleep?" he said. "Do you suppose I would not, if I could? I always start from here and come back here. I say to myself, 'It will take me an hour to reach the place where I can see her window.' It is something to hold one's mind in check with. This rambling—and—and forgetting what one has meant to think about is a terrible thing."

"Come home with me," she said. "We will not talk. You can lie on the sofa and we will go away. I want your mother to sleep."

Something in her presence began to influence him to a saner mood.

"What are you doing here?" he asked.

"It is midnight."

"I am not afraid. I could not bear to stay in the house. We sit there——"

An idea seemed to strike him suddenly. He stopped her and asked deliberately:

"Did you come because you thought I might do myself harm?"

She would not answer, and after waiting a second or so he went on slowly:

"I have thought I might myself—sometimes, but never for long. You have no need to fear. I am always stopped by the thought that—perhaps—it is not worth it after all. When things look clearer, I shall get over it. Yes—I think I shall get over it—though now there seems to be no end. But—some day—it will come—and I shall get over it. Don't be afraid that I shall do myself harm. If I am not killed—before the end comes—I shall not kill myself. I shall know it was not worth it after all."

The tears had been running down her cheeks as she stood, but she bit her lip and forced herself to breathe evenly, so that he might not find her out. But just then, as he moved, a great drop fell upon the back of his hand. He stopped and began to tremble.

"Good heavens!" he cried. "You are crying. Why do you cry for me?"

"Because I cannot help it," she said in a half-whisper. "I do not cry often. I never cried for any one before."

"I'll take you home," he said, moving slowly along at her side. "Don't cry."

TWO COUPLES: A WHITE AND A YELLOW.

I. THE WHITE COUPLE.

EARLY one Sunday morning the mulatto carriage-driver of Colonel McPherson Berrien called to see me. I was pastor of a church in a southern city at the time, and the colonel was one of its leading members. It was easy to see at a glance what it was my visitor wanted. The fact that it was Sunday might account for the broadcloth he wore and the linen, the watch-chain, not of the purest gold, across his white vest, and the gloves, the polished boots, the exuberant handkerchief, even for the Sabbathal silk umbrella, the day and not the weather being the occasion thereof; not even the sacredness of the day could explain, however, the air of special importance which clothed Milton (for that was his name) beyond all these. Like all mulatto house servants of rich folk in those days, he resembled nothing so much as a Frenchman masquerading in yellow, but there was now an added gravity, as of an ambassador.

"I took de extreme liberty," he said, with a bow, and a bearing thereafter which would have satisfied George the Fourth, "to call, sah, and to beg to presume upon your time. De circumstances is dese. I was requested to ascertain, sah, if it would combine wid your convenience to be at your residence dis afternoon at three o'clock?" and, while I was considering his request, he repeated the question in terms made still more magniloquent by his evident anxiety.

"I will be at home," I remarked, after Milton had received his reply, and, with a profusion of bows, had departed. "Yes, I will be at home. Poor things! I suppose the rumors we have heard must be true. I will *not* do it, but it does seem such a pity!"

Sure enough, at the time appointed, Milton drove up to our gate, magnificent upon his master's carriage, and two young people got out. Harry and Felicia, as we had feared! Now, the parents of these young persons were, on both sides, opposed to their marriage; as I well knew, violently opposed, and for excellent reasons. Harry's parents, Colonel Berrien and his wife, were absent on a visit to a distant city, never dreaming of a disaster so terrible, in their estimation, as was this. The youthful pair came

up the walk elaborately dressed, so bright and happy, more than all, so entirely unconscious that, having escaped their parents, any obstacle remained in their path to perfect happiness, that it did seem a hard thing to do that which had to be done; but, to me, there was no alternative.

We made it as easy for them as we could. A lady of my household took Felicia into one room to remonstrate with her, while Harry followed me into my study. He was a handsome fellow, who had suddenly shot up during the last year or two into a tall, pale, gentlemanly youth. Like the sons, in general, of rich fathers, pretty much the world over (at least of parents who had failed in duty toward their children as his had), there was a certain fluidity in poor Harry, a genteel languor, a general limpness, an unaffected absence, as of the bone and muscle, of a single purpose in life beyond enjoying himself as much as he could, and with whatever happened to come along. As I laid my hand upon his shoulder and looked into his honest, helpless eyes, I felt that he was like so much very white, but very soft clay, which needed only the pressure of poverty to have been hardened into the noblest and most enduring marble. But, alas for his pliable nature! He had his marriage-license ready in his hand. I would not look at it. He was not eighteen, as I well knew, and he had got the document by swearing that he was twenty-one.

I need not reveal the special reasons I urged upon Harry why he should, at least, wait until his father got home. They were reasons so excellent that he consented to do so. He gave me the license, at last, quite willingly. I should have torn it up on the spot, but he was such a gentlemanly fellow that I gave it back to him, telling him that I trusted to his honor. Felicia, however, *was* of age, and had grown up in other circumstances altogether, and all the effort being made at the same time in the other room was worse than wasted upon her. It may be hard at times to persuade a lady to marry, but that is a trifle to the labor of inducing her at other times *not* to marry. Breaking through all persuasions, as well as doors, the lady hurried into my study, seized upon the poor boy, marched him without an adieu out of the house, down the walk, into the carriage, and, so, they drove off to

a Rev. Mr. Brown, who did marry them with hardly a question.

Of course, the whole affair was the sensation of the day, and comments, pro and con, were many and loud. A week after, as I passed by the business place of the father of the bride, he called me in and thanked me heartily for my course, and hastened to add:

"Harry Berrien tells me that he paid Mr. Brown one hundred dollars for marrying him. There, sir," he continued, opening his pocket-book and putting the bills in my hand, "if you will do me the favor to accept this, you can call it pew-rent, or whatever you please; there is two hundred dollars for *not* marrying them."

One is constrained, however, to compress appearances here into the limits of sober truth. The money was Confederate (for it was during the war that all this took place), and by no means at par. It was better than nothing in days when no pastor in the state had other salary than those the ravens brought to him sitting beside the brook Cherith, and when I consoled laughingly with Mr. Brown next time I met him, upon his inferior gains, he gazed at me in astonishment.

"I suppose," he said at last, "that the young man's previous practice of lying to the county clerk had made falsehood come easy to him. And so it is true, as you tell me, that you refused to marry him? He told me—or was it the lady who said so?—that you were anxious to marry him, but that you were in such agonies of toothache that they could not even see you. It seemed very strange to me at the time. As to a fee—the young scamp! he never gave me one cent."

When I remonstrated with the county clerk he said:

"If I had not given him the document he would have driven into the next county and got one there!"

"But I learn that Colonel Berrien intends to sue you," I said; for the colonel, after thanking me for my course, had told me his intentions in a burst of wrath at the clerk.

"Sue, does he?" that popular official said with a laugh, as he offered me a cigar and lighted one for himself. "Sue? I'm very willing. The fine for issuing a license to a minor is five hundred dollars. Very good. The day Colonel Berrien sues me I will begin suit against his son for perjury. That, you know, is the state-prison. Tell the colonel to sue ahead!"

During a life-time one regrets, I suppose, at the rate of one No to a thousand Yeses. Certainly I never was sorry for having said no on this occasion. The match was a most miserable one. So miserable that I will merely add that, when, a few months after, the poor young fellow lay dead in his coffin, there was a general feeling in the community that "it was," as the county clerk himself told me, "about the most sensible thing that ever happened to him, poor boy!"

But I have told all this chiefly by way of preface. It is not so much of Harry Berrien as of a very different bridegroom concerning whom I wish to speak; for Harry was as a white but unsubstantial atom of a past era in comparison. What has been told is part of what remains to be narrated; and yet a sea rolls between the era of Harry Berrien and the next, and it is a sea of blood.

II. THE YELLOW COUPLE.

THEY have a phrase at the South which needs no interpretation—that such and such a thing is done "for grandeur." Now, if there was a person who exemplified as well as delighted in "grandeur" it was Milton, the mulatto carriage-driver of whom mention has been made. He was a splendid specimen of a "bright" mulatto, and in every sense, for the brightness was not limited to his color. When the war began he was about twenty, for it was not often that anybody could speak certainly as to the age of a negro; the owning of a gold watch would have been as great a wonder, almost, to a slave as the possession of a birthday,—a day, that is, to be certainly known and observed as such. He would have brought on the auction-block at that time considerably over a thousand dollars. One would not have thought of him then as other than "a likely boy,"—certainly I did not. He always opened the front door and bowed to me when I called at his master's house, but, beyond saying, "Morning, boy," I really gave little more attention to him than I had done to the tiger-lilies in *their* station and shades of yellow along the walk as I came up from the front gate. There came a day when we saw the familiar black faces around us in a different light and scrutinized them more closely.

As is well known, the silence of the slaves in the South during the war, their absolute passiveness and attitude of waiting the

event without moving hand or foot or tongue, was one of the most curious features of that historic time. So well was this known that no watch whatever was exercised over them on the part of their owners. Certainly none was in those parts of the South where the Federal army never penetrated. One could not but be greatly amazed during those long years at the profound quietude of the blacks. Through all the excitement, the marshaling of troops, the days of public fast or thanksgiving, the ringing of bells for victory, and the ever-deepening despondency of the whites toward the close, over defeat, their apparently unconscious silence was remarkable. The end came at last. A strip of printed paper pasted on the door of our post-office announced the will of the Federal Government that all slaves should be free, the armies, representatives of that will, not having as yet got within many hundred miles of us,—the first Yankee of them all not arriving for many weeks afterward. By a unanimous, although wholly unconcerted, movement, the same result followed at almost the same hour on every plantation and farm, as well as in every household, the state over. Each owner assembled his slaves, told them they were free, but gave them as an instant alternative, to go at once or, if they remained, to stay on the same terms of steady work for their food and clothing and owner's care as from the creation of the world, for so it seemed to them and to all.

A few staid. Generally it was the old and those who were cumbered with young children. In some instances the life-long bonds of mutual respect, as well as love, were strong enough to hold master and servant together as of old. The vast majority scattered at the first opportunity like birds out of a cage. They could not believe, otherwise, that so wild a dream as freedom had become actual fact, and perhaps it was nature.

Milton was one of these. At twelve o'clock his owner had told him and the rest of "the people" that they were free; at two o'clock the same day Milton was in town, five miles away, done with his master and his master's plantation forever, fifty cents in his pocket, and not having waited to eat any dinner. The man had come into sudden possession of the fortune of himself, was henceforth "lord of himself," leaving the future to decide whether or not it was to be a "heritage of woe." The only clear idea Milton had on this day

of days was Seely! Now Seely was by no means as good-looking as Milton, but she more than made up for it by being more sensible. She was cook for a Mr. Madison who lived in the edge of the town, and she stayed with her master and mistress, at least for the present. One day, very soon after the close of the war, Milton called upon me; matters were so far changed that I now looked at him for what might be stated as being the first time. With regular features, magnificent black eyes, a complexion of precisely that combination of crimson and gold which you find in a ripe pomegranate, with mustache and hair as black as black can be, my visitor was a sort of tropical product better worth studying than I had ever before thought. There was a subtle modulation,—not more in the motions of his body than in the tones of his voice,—which is usually regarded as the last and highest perfection of culture. When he had called upon me before, on behalf of his young master, he was merely the most intelligent and expensive part of his owner's equipage. Now, all the rest of the carriage and horses, so to speak, was gone. He had again come upon business of ceremony, but it was on his own behalf; the flourish was there, but there was depth to it now, for he came to be married himself, and I understood it all when he came in.

It was "for grandeur;" although I had lived in the South all my life I had, somehow, never before been called upon to marry a colored couple. But it was not merely because I was a white minister that Milton now called upon me; I had profoundly impressed him that Sunday by refusing to marry his young master. That young master was dead and gone with the very name itself; gone with God knows how much that was good and noble in the epoch departed. It was very little Milton knew about the period upon which he had now entered. At that moment all he wanted to do was to begin his new career by marrying Seely, and by getting married as grandly as possible. I had not seen him since he had become free; and it is not often that one has so historical an opportunity. Nobody has as yet found, even among fossils, the individual in whom the ape became a man; but in Milton, standing hat in hand and bowing before me, was comprised the whole process of the evolution of the slave into the free-man.

"Good-morning, boy," I began; for, in the old days, if a negro lived to be as old

as Methuselah, he was addressed in that way to the end.

"I thank you, sah," he replied, hesitating a little, and yet becoming somewhat stiff amid his bowings, "thank you, sah, but I am not a *boy* any more, I am a *man*." I looked at him with a fresh interest and said, somewhat coldly,

"Well, what can I do for you?"

"I am come, sah," he said, "hope you is not offended, sah, to get you to marry me,—to marry me to Miss Seely Madison."

"To Miss — who?" I demanded.

"Miss—Seely—Madison, sah. She dat was de cook ob de Madison family," he replied.

"Then your name is —?" I began.

"Mr. Milton McPherson Berrien, yes, sah," he said. "We hab to hab some more name dan we had before. She took her massa's name; I took mine. Fust families, as you know, sah. Dat is de reason we want you to marry us. You may be sure I will pay you, sah, wedding fee, sah," he added with a bow and a wave of his hand.

"Then I will not do it, Milton," I said. "You will need every cent you can get, boy," I added with a sorrowful look at him; "do you know —"

But I did not go on. Why should I cloud the wedding glory? Besides, his eye had lost its light and his cheek its color as I spoke; evidently he *did* know, in part at least. We have all of us read about Undine, a creature, and a joyous one, of the elements. Beautiful Undine had no soul, was merely a water-nymph, going back at death into the airlike the foam of the sea. It was the coming of a soul to her at her marriage with her lover, which brought care and suffering, as well as immortality. So with the ex-slave, the coming of freedom had brought to him weight as well as wings. There was no longer a master to relieve him of all care as to home and clothing, as to food and physic, and Milton was plainly a wiser and a sadder man already.

They were married at Mr. Madison's house. Mrs. Madison had lost by the freeing of Seely one thousand dollars, and nearly that sum in every one of their house servants, to say nothing of the people on their plantation; but she entered, none the less, into the spirit of the occasion. Woman *is* an angel! There was Mr. Madison, for instance, so broken-hearted by his ruin that he had suddenly become very old. Not so his wife; she had as suddenly become ten years younger; had put forth wings hidden other-

wise until death; was bearing up herself, her children, her husband, her entire circle of ruined associates, upon the strong pinions of her love and faith. Her husband's voice had sunk into a wail; hers had risen into song instead. I never knew what a beautiful and happy woman Mrs. Madison was until that night of the wedding.

"The only extravagance Seely was guilty of," she told me, before the ceremony began, "was this. We had promised all our people pay, you see, after they were freed. Well, Seely put them up to it and they all saved, the house servants I mean, every cent of their first month's wages. At the end of the month they laid it all out in the materials, and Seely cooked and iced dozens of cakes of every sort, and they deliberately sat down and gave a night to eating them up. They ate enough to kill them! But you know nothing they eat ever hurts *them* at all. Since then, all their money goes, at least that of all the rest of our negroes (and that is the way with them all over the South, I suppose), for bright calicoes, brass jewelry, candy, and all sorts of canned fruit, oysters and the like. Poor things! But I am so glad you consented to marry them. Try and not laugh; here they come!"

It could have been wished that there had been fewer bride's-maids, seeing, especially, that there were for me, at least, too many groomsmen. When the bridal party came into the large parlor, the very multitude thereof tangled matters so that it was with difficulty I kept from marrying the wrong couple. Had there been less jewelry, shorter trains, greater parsimony in the article of veils, more economy as to grandeur in general, it might have been better. Sure, I am, that the marriage of Victoria and Prince Albert could not have seemed quite so momentous to the parties on that occasion; but the individuals in this instance were not born to the purple, and the weight was too heavy; a funeral would have been lively in comparison. As I knew that nothing would please them so much, the ceremony was made very long, and never did a clergyman have greater excuse than I did then for admonishing a wedding pair minutely and at length. But they were married at last, thoroughly married! and the crowd fell back into a hopeless tangle again as they left the room. The wedding supper came more natural to them—that is, so long as they were waiting upon the white people seated at table, which they did eagerly and well, bridegroom, bride and all. Immediately after, they arranged

a wedding feast for themselves in the kitchen, and, with Mrs. Madison's cordial assistance, it had been made as sumptuous as possible. But, alas, the moment they sat down to it a solemn silence fell upon them. In former days they would have been the happiest of people, their talk and laughter as heart-felt and free as the chattering of squirrels, or the song of birds. Not so now. They hardly dared to smile, much less laugh. It was all too new to them, the grandeur was too great!

It was in vain that good, bright-faced Mrs. Madison remonstrated with Seely afterward. Seely loved her mistress dearly and was sensible enough, but her husband had other ideas, and immediately after the wedding, they went to housekeeping. A wretched little leaky shanty it was in which they began, with nothing but the clothes they had on, and almost no furniture at all. If they could have been contented to remain as servants under Mr. Madison's roof they would have had their board and lodging free, and could, in time, have saved enough to begin an independent life comfortably. But, no,—at least Milton said so,—they could not *feel* free unless they were off by themselves, even if it had to be in their tumble-down hovel. It was foolish, but it was nature, and you and I, perhaps, might have done the same.

Ten years afterward, and what a change! The bridegroom had become the Hon. Milton McPherson Berrien. They lived in a handsome house which he had bought and paid for. There were a piano and pictures, horse and buggy, bills coming in for groceries and ice-cream, and the like. Under all her superabundant millinery, Mrs. Seely Berrien was very much the same sensible soul as before, but by no means as much happier as one would have thought. Very rarely was her husband at home those days. He was in the legislature, on the stump, in the newspaper offices, along the streets, reining in his fine horse beside the cotton fields to have, contemptuous of the helpless overseer, a political talk with the freedmen at work therein. Had you known him before the war, you would have been astonished at the alteration in the man! It was a something beyond the transformation of the meanest of grubs into the most brilliant of butterflies. You had no idea hitherto that the range of transformation in a human being was so great; it gave one a new conception of the possibilities which death may bring to us all. The "yellow boy," willingly ignorant when

a slave of everything in the universe, without a thought beyond his horses, his master, his Sunday clothes, and, at the very highest, his Seely, was now—what? You could not meet a man on Wall street who would have been readier to talk to you about greenbacks as distinguished from gold, or fuller of confidence as to the best ways of making money. There was no Yankee in New England more willing to engage with you in argument upon any subject whatever, the Hon. Milton thoroughly understanding religious themes as well as all others, but generally escaping as soon as he could to politics, as to a topic of more practical interest. As a Christian minister, there was, in his own opinion, nothing more to be desired in him as to head, heart or daily life, but his highest genius was in political affairs. You speedily saw why he regarded himself as so perfectly informed, how it was he was so finally assured in reference to everything. It was by reason of a belief in himself as blind as that of a baby, and yet as colossal and bronze-like as that of a Bismarck.

The Hon. Milton McPherson Berrien had become an orator also. He was more than ready to speak upon every subject, anywhere and everywhere. At a camp-meeting of his own people, or at a political assembly, in a prayer-meeting, or upon the floor of the legislature, for him to get up—which he always did—was the sensation of the hour. The negroes listened to him with pride, the whites with contemptuous amazement at the copiousness of his words, and the coolness of his assertions. If, two minutes after the fervors of the orator's eloquence had ceased to blaze, any man from Vermont had tried him as to a trade in horses or in town-lots, he would have found him as sharp at a bargain as the sharpest in any market.

Alas for poor Milton! he was changed by his eating of the tree of knowledge in more ways than intellectually. A Democratic editor himself told me that he had bought the man in reference to one railroad subsidy pending in the legislature, of which, so far as his own color was concerned, the ex-slave was a leading member, in a very literal sense of the word. A Republican lawyer, equally to my own knowledge, had purchased him as regarded another and still more lucrative matter in the same august body. Worse still, persons having rival claims before the legislature found out afterward that although each had "secured" the influence of this distinguished statesman at a high figure, the Hon. Milton had, in the

end, betrayed them both in behalf of a third and higher bidder. "Mighty uncertain" were politics in those days! Before the war, his master had paid, say, fifteen hundred dollars for his carriage-driver, but it was, at last, only the body of the man that he obtained. These days it was the soul instead of the former slave which buyers purchased. In the old days, Milton had no agency in the matter at all; to-day he was his own auctioneer, loud and eager, and it may be because it was his soul that he was selling, but he certainly asked, and got, tremendous prices. It is true that legislative white sheep, as well as black, were bought and sold in his region exactly as traders and butchers do sheep by the flock, but it was worse than that. Deep down in their souls those poor freedmen wanted, I do know, to do what was right. They all looked up to the Hon. Milton with pride and perfect trust, and his money was made by getting up "corners" in his own people and speculating in their pitiful ignorance. To which party the Hon. Milton finds it for his present interest to belong I do not know. The fact is, just now he exists in a condition of suspended infallibility. While awaiting events he possesses a serenity in lying,—lying upon the stump, in the papers, before Congressional committees,—which is indescribable.

I do not blame the man for being yellow, any more than I do for being so very oily and supple, if it were not that he reminded you so much of a tiger, there is such a ferocity in him as to the making of money. There were rumors that he led midnight parties, first on one of the political sides and then on the other, for the purpose of frightening voters of his own color—dark and devilish parties which left more than one man dead and mutilated in the cypress swamp; but the whitest lady in the land could not deny the charge with greater apparent horror than he does, and who knows? It is a general impression that the Hon. Milton is at bottom the greatest of cowards, but who can tell what desperate bravery he might not show in some tropical gust of passion? Your feeling, however, is that he is less apt to be swept away himself than to be himself the gust which, for his own ends, sweeps others before him.

I knew a Southern Congressman who came within one vote of being elected speaker of the House before the Civil War. During that conflict, he was a Union man, a general in the Federal army and the provisional governor of a Southern state.

"Sit down, sir, sit down," he said to me in his office one day after the war was over. "Sit down; I want to tell you one thing. You know that when the war began, I was an unbeliever, an atheist? Of course, everybody knew it. Now, sir, what I want to say is that, since then, I have seen things so ordered, contrary to, otherwise than, immeasurably unlike, and superior to, the passions or plans of any man or set of men, that, sir," and his voice became low, and to my amazement his eyes filled with tears,—*"I now do know that there is a God who governs the world He has made!"* In this belief lies the strong consolation of a good many of us, South and North. The chemistry of events in the South—the diplomacy, I would prefer to call it, of Providence there—is as wonderful as is the crystallization of the salts, or the generations and motions of the planetary system. Possibly we could not have had the constitutional amendments if the ballot had not been put into the astonished hands of the former slaves. That seems to us now to have been, in some senses, a most disastrous necessity and remedy. And yet look calmly at it. If the power of voting had been withheld from them provisionally, they would have been a fermenting, possibly an insurgent, mass until they obtained it. They have had it, and awful is the mess they have made of it, as we all acknowledge, not so much by reason of their ignorance as of the rascality of unprincipled adventurers. *Now* they seem, as a body at least, to have settled down to hard work, contented to struggle up individually as the rest of us have to do. Matters have changed astoundingly of late. Where the Hon. Milton once was, so to speak, everybody, he is now nobody. When he was a slave he was a zero, now he seems to have become a zero again. Worse—he is a zero who tried desperately to do something great and ruinously failed. However, no one dreamed sixteen years ago, let us remember, that the slave would become the senator, and who dare prophesy as to what the *man* may come to be sixteen years hence? Let us not be too certain. In tropical lands where there has been one earthquake there may be another. The Hon. Milton seems to have become a sort of ex-phenomenon, but he is too new to science to be accurately classified and finally catalogued even yet.

I sometimes wonder, as I look at him, if he was not really better off that Sunday, centuries ago, it seems to be, when he came for me to marry his young master. He perplexes me, for there is no guessing from any

data in the past what he may not be in the future. There are aspects of evolution in the man which would astonish and, possibly, terrify Darwin himself. While these lines are written the blacks are contemplating an exodus to the north-west. The Hon. Milton is greatly perplexed, and is saying to himself: "Shall I be the Moses to lead them out of Egypt, or the Pharaoh to make them stay where they are?" At times one could wish that he would head a colony of his people, say to Liberia, for he can hardly get to be even a cabinet officer here, and he might be president, possibly emperor, elsewhere.

But you would like his wife. She reminds me, in her relations with her husband, of a child whose brilliant toy balloon has

broken the thread by which it was held and is careering before the winds. Long ago she has given up trying to understand, to say nothing of holding, him, and is merely watching him, fearing for him even more than she wonders at him.

The great American question of to-day is not as to greenbacks or gold, as to centralization or state rights. Stand forth, Hon. Milton McPherson Berrien! *You* are the problem of the day! Your rival on the Pacific coast is nothing as a Question in comparison to you! I do not believe that any of us know how to hold and manage you much more than does your good, black, sensible Seely. May God solve and save you! He alone can.

MADAME BONAPARTE'S LETTERS FROM EUROPE.

CONCLUDING PAPER.

At the conclusion of the first paper of these letters from Madame Bonaparte to her father, William Patterson, Esq. (published in the last number of this magazine), we saw that everything was arranged for the departure of Jerome for America, previous to which event he had been in Rome in all nearly three months. He did not, however, see his father, who was absent from the city all that time. On the 25th of February, 1822, he embarked at Leghorn for the United States, reaching New York on the 14th of April. Madame Bonaparte's object in allowing her son, not yet seventeen, to make this winter voyage, was that he might carry out her darling project of marrying him to his cousin Charlotte, the daughter of Joseph Bonaparte. So we find that two days after his arrival in America, he visited his uncle at Point Breeze near Bordentown, New Jersey, where the ex-King of Spain had taken up his residence after the battle of Waterloo. In all the letters written at this period, Madame Bonaparte shows how ardently her heart was fixed upon marrying her son to Joseph's daughter, and how persistently she urged her father to secure strong settlements in favor of Jerome.

A few weeks after Jerome sailed, his father arrived in Rome, as we ascertain from a letter of Madame Bonaparte's, dated Rome, March 8th, 1822:

Your father arrived yesterday,—wrote to your aunt, who replied she would not see him because he would begin *de lui parler des choses désagréables*—he went however and found her in bed; she pretended we came to Rome uninvited by her, that she received us from compassion; he contradicted this, etc. I have not seen your father and most probably I shall not, for he does not wish it for many reasons. He and Madame have been at the Princess's; Napoleon* was there last night. They seemed to have all made up for the moment. * * * For heaven's sake spend as little money as possible, and recollect the smallness of my income and the many privations it subjects me to. I foresee nothing but poverty and solitude. I shall go to America if you think there is the least necessity for it. * * * I am very uneasy about you, and almost blame myself for not going with you to take care of you, and shall never forgive myself if you meet any accident by being alone.

In a letter addressed to her father, dated Paris, July 7th, 1822, Madame Bonaparte said she was willing to return to America, provided her presence there would aid her matrimonial plans for her son. But, having received letters which informed her that the proposed marriage with Joseph's daughter was not likely to come off, she writes:

There is nothing can or ever will surprise me in that family. The only way is to act and feel exactly as if they said and promised nothing. * * * There is one advantage from the connexion, which is, that he is placed by it in the first circles of Europe, that his acquaintance has been sought by persons of the highest rank, and that, with very little money, he

* Son of Louis Bonaparte, who died in 1837.

can always live with them. This I consider a great point, and although I sincerely deplore any circumstance or combination of events which oppose his being rich, I console myself under the present disappointment by the comforting conviction that his name and rank are beyond the influence of any one's caprice. * * If by chance the uncle goes back to his former dispositions, you know that not the most amiable verbal promises must induce him to put himself in dependence, that parchment deeds examined by a skillful lawyer are the best and only guarantee for happiness, and certainly the only assurances I shall ever rely on for him.

The boy must neither seek nor avoid being with his relations. If they invite him, let him go to them; if they do not, he is not called upon to run after them. * * His conduct should appear natural, respectful, and as affectionate as nephews generally are to uncles, independently, however, of all obsequiousness or meanness. He is in every respect upon an equality with them, and I think there would have been entire reciprocity of advantages in forming a connexion. Although he has not money, he has other advantages. He has name, rank, good natural capacity, good appearance, and if he does not suit them, there are perhaps many other families that he will suit. Another capital point is, that he is not a woman, it being much easier to marry sons than daughters, I mean to advantage; for as to the marriages in America, they are simple acts of youthful folly and inexperience, and, although they may be liable to fewer inconveniences in a commercial or republican society than they would be in Europe, are still absurd and improper in many respects. * * I have no confidence in the banks, insurance companies, road stocks, or, in short, in any stock in Baltimore. The people of business there all live above their means, all speculate to support the extravagant wants of their families, and from folly are driven to dishonesty. Their want of moral feeling and scandalous effrontery when detected in the commission of crimes which conduct to the pillory in other countries have entirely destroyed the reputation of the place, and made me take a resolution to sell out the little property I unwarily confided to Baltimore companies. I shall wait, however, until people forget the explosion that took place three years ago; human credulity is so great that confidence may perhaps revive and purchasers be found for what I think very precarious property. I can never again consider any stock but government at all secure, but my want of reliance on all other kinds is no reason why others should not be firm believers, and their faith may serve me effectually by giving me a tolerable price for my property when I decide upon the time to sell it. * * I wish Bo's education to be particularly attended to; on that no money to be spared. Every other kind of saving is a gain, and no one can be more disposed to save in everything than I am; but a good education is never too highly paid for. Money spent in that way brings a good interest to every one. Adieu, my dear sir.

Madame Bonaparte soon returned to Geneva, from which point were written the next five letters. Bo meanwhile had entered Harvard College.

GENEVA, October 15th, 1822.

MY DEAR SIR: I have no letters from Bo since the date 29th June. There is a report that his grandmother is dead,

which may be true, but I have no letters from any of the family. I write you this in haste and beg you to make him acquainted instantly with the report. I hope it is not true. She appeared to me an estimable person in every respect and showed great fondness for this poor child. I lament his having left her so soon, as from the sense and penetration which distinguished her, I am convinced she would have taken great interest in him had he been more with her. She appeared to be exempt from the shuffling and double-dealing common to people on the continent of Europe, which troublesome qualities are as useless to their possessors as wearisome to those on whom they are exercised.

Adieu. Yours affectionately.

GENEVA, 11th December, 1822.

DEAR SIR:

I am most happy to learn that Bo is applying himself assiduously to his studies, and that his absence from me has not abated his diligence or ambition.

Without partiality, I may say that there is not in the world a boy who combines greater intelligence with more remarkable personal beauty. In his situation a good appearance is important, because, although every one cannot appreciate mental superiority, the most stupid and ignorant are sensible to a handsome exterior, and for one conspicuously placed as he is, it is fortunate that he is not misshapen nor disgraced by vulgar common features.

I hear Mrs. R. P. is coming out; she will be the best sailor in the world. Her sisters are not yet married, which, considering their persevering endeavors and invincible courage rather surprises me.

I remain, very affectionately yours,
E. P.

GENEVA, 24th December, 1822.

DEAR SIR: * * I have been here since the middle of August, and I find my health much improved by my residence in this place, which indeed suits me better in every respect than Paris. * * *

There are balls or parties every evening, and I have not spent one during five months at home. My intimate friend is a lady of your age, who never passes a day in her own house unless she gives a ball, or a card party, which she does every Friday. I shall never regret having taken him [Bo] to Italy, because, although people cannot command success, they ought to secure to themselves their own approbation, and the conviction of having done all that depends on their own exertions. Bo is neither deficient in capacity nor the knowledge of the demands of his situation in life. I think myself fortunate that he was not born a fool, which two-thirds of the children brought into the world are; had he been one, it would have embarrassed me exceedingly to know what to do with him. It is only permitted to women to be idiots, or men whose fortunes have been accumulated by their wiser ancestors, and which they may enjoy without trouble. * * * I think Bo clever enough to conduct himself better than most children of his age, but the unhappy propensity of his father's to throw away money makes me perhaps more fearful on this subject than I need be. He is entirely ruined by his and his wife's absurd prodigality, added to their confidence in rogues. Poor man! his faults always proceeded from want of judgment, more than badness of heart; but when the first is wanting, nothing improper can excite surprise.

Very affectionately yours,
E. P.

GENEVA, 5th February, 1823.

MY DEAR SIR:

There is, I hope, no danger of his [Bo] forming an imprudent matrimonial connexion; if he cannot marry suitably, and in America he could not (with one exception, and that I fear is out of the question), he can live single. Marriage offers no such comforts as to induce rational beings to give up their independence without some return of advantage. I am at times not happy on the subject of his falling in love, recollecting the extreme folly and great simplicity of the people he sees, who, without giving a single thought to prudence or the future, marry some poor young woman from the caprice of the moment, and consign themselves to her insipid society and the torment of bringing up a family of children. It may be patriotic to sacrifice one's time in this way, but it is not charitable to one's self, and charity well understood begins at home. I hope you, my dear sir, will inculcate to him privately the nonsense and absurdity of such marriages, which are unknown beyond the new world. In Europe no one marries unless they have the certain means of supporting their children, and in Geneva no one has more than two or three because they say they would be too expensive. Nothing can equal the people here for calculation.

GENEVA, February 15, 1823.

I write to Bo and you to-day to inform you both of all I have learned respecting Madame. She is now quite well. The report of her death originated from her having been despaired of in September. She then made a will by which she left her whole fortune to the son of the Emperor by Marie Louise, excepting only fifty thousand dollars to each of her own sons, and twenty-five thousand dollars to each of Lucien's sons. As her son Jerome is ruined and in debt, and has an expensive wife and her two children to provide for, she being entirely without property herself, fifty thousand dollars are of little use to them. I suppose the Emperor wrote to her in his last moments to provide for his son, which he was unable to do himself, having left his whole property to the people who emigrated to St. Helena with him. She owed every thing to him; therefore justice demanded that she should leave the greater part of her savings to his son; but justice might have induced her to leave something to Bo, and her not having done it does no honor to her reputation. Her fondness of him and her attentions must naturally have led the child to suppose she would not have acted in this way; therefore it was with great reluctance that I wrote him these particulars, but duty required that I should not allow him to encourage hopes which might lead to improvidence or habits of prodigality on his part.

PARIS, May 6, 1823.

DEAR SIR:

I have been pretty regularly paid twelve hundred dollars per annum for the last two years for Bo's expenses, but as he [Jerome] is ruined I have little expectation of this sum being continued, and I spend not a farthing more than I should do if he had not promised it. It is only so much out of the fire; whilst it is paid I shall take it thankfully, but no one can suppose I should be such a fool as to spend upon an uncertainty.

He [Bo] was very much attended to by all ranks in Europe, and admired by every one. Some ladies in Rome ran after him so much that I feared his being spoiled, although he seemed quite unconscious of it, supposing probably that women old enough to be

his grandmothers could not be foolish enough to fall in love with him. It is certain that his beauty attracted great attention; a German princess told me that she had followed him once in Geneva, at a ball, from room to room to look at him, and that he was the handsomest creature she ever saw. He certainly is the handsomest boy I ever saw of his age, and in all respects the finest creature possible.

The marriage with M——'s son* does not surprise me, as the uncle is notorious for want of stability in his plans, and there is no Frenchman whose word is less brittle than pye-crust. The people on the continent of Europe have not the most remote idea of truth or principle in any way, and no one can live long with them and remain ignorant of their being utterly destitute of anything like moral feeling. I was the first traveler who found out what the Genevans really paid, and it required some address to get at this useful information. They show me great respect for my adroitness, and seem to consider me now worthy of being dealt fairly with in prices. No Jew has ever been able to get a living in Geneva. The French proverb is: "It takes four Jews to make a Genevan." They are the cleverest people in Europe and the most roguish, not excepting the Italians.

PARIS, May 22, 1823.

I hear Mme. M.'s son is gone to Philadelphia, and have little doubt he will marry his cousin. I wish them joy of the union, but until they have been at church it is impossible to be quite certain that the family politics may not change. I rather think the grandmother's wishes were not much consulted on this occasion, having some reason to believe that she remembers how little her family stand indebted to the folly of the young gentleman's father, which contributed greatly to the misfortunes of the E—— [Emperor], her son.

I remain, dear sir, affectionately yours.

GENEVA, November 9, 1823.

DEAR SIR:

I learn from you with great satisfaction that Bo is now profiting by the advice I have never ceased giving him since he came into the world, which was to distinguish himself. It would have been a sad mistake if he had fancied an ordinary education or common attainments would have sufficed for him. He is too conspicuously placed to permit himself to rest contented with the exertions made by other people, and however agreeable it may be to bear a great name, it is less easy to bear it with propriety than one which attracts less notice.

The land of romance is now only to be found on the other side of the Atlantic. People on this side know the exact value of everything and turn existence to its best account. Love in a cottage is even out of fashion in novels. I should consider an amiable, prolific daughter-in-law a very poor compensation for all the trouble and anxiety I have had with that boy, and most sincerely hope the *amiable, scheming* (for even in America the women know their own interest and look as sharply after good matches as they do here) young ladies will select some other unsuspecting dupe to make wives of them.

*The projected marriage of Charlotte with the son of Madame Murat, widow of Joachim, King of Naples, is here referred to.

In the spring of 1824, Madame Bonaparte returned to America, where she remained until early in the summer of 1825, when she again sailed for Europe. She spent the autumn of 1825 in Havre, and was present at the reception given to Lafayette upon his return from America in October of that year. In her next letter, Madame Bonaparte announces the marriage of her sister-in-law, Mrs. Robert Patterson, to the Marquis of Wellesley. The lady was the granddaughter of Charles Carroll of Carrollton.

HAVRE, November 2, 1825.

DEAR SIR: I write by this packet to announce to you the marriage of Mrs. Robert Patterson. Mrs. Brown received a letter from Betsy Caton the day on which it was to take place.

She has made the greatest match that any woman ever made, and I suppose now that people will see that Mrs. Caton was right in starving herself to keep her daughters in Europe. The Marquis of Wellesley is Lord Lieutenant of Ireland. He is sixty-five. He married an Italian singer, by whom he had a family of children. She is dead. He has no fortune; on the contrary, he is over head and ears in debt. His salary is thirty thousand pounds per annum as Lord Lieutenant of Ireland. He will be there eighteen months longer, and if the King does not give him another place he is entitled as a poor nobleman to at least a thousand pounds a year. He is the brother of the Duke of Wellington.

The Catons, I suppose, will be enchanted at the match, and with reason, too, for it gives them a rank in Europe, and with Mr. Carroll's money to keep it up they may be considered the most fortunate in the United States of America. His being without fortune is of little consequence when his rank is considered. There is not a woman in Europe who would not prefer a man of rank without money to the richest man in the world who has no title. To be sure, it would not have done for a poor woman to marry a poor nobleman; but of course old Mr. Carroll will strain every nerve to maintain his granddaughters now that they have, beyond all probability, connected themselves so highly. Mary's fortune is reported in Europe to be eight hundred thousand dollars cash. It has been mentioned in all the papers at that sum. Mrs. Caton deserves the unexpected good fortune which has now occurred to her family by the sacrifices she has made to support them abroad. I can only say that if Jerome were a girl and had made such a match, I am convinced that I should have died with joy.

Yours affectionately,
E. PATTERSON.

In the summer of 1826, Jerome joined his mother in Europe with a view of meeting his father, and continuing his acquaintance with the rest of the family. Madame Bonaparte writes:

PARIS, 23 January, 1826.

DEAR SIR: I have been advised by several persons in Europe to have Bo sent out by way of Leghorn to visit his father and the rest of the family; but if it is done, it must be kept a secret from all of his father's relations in America, as there is great

jealousy about the old lady's money. The Cardinal* has sold his hotel in Paris for five hundred thousand dollars. The sum is immense, but as his establishment took up a whole square in one of the best streets in Paris it has been considered a fair price.

FLORENCE, 6 October, 1826.

DEAR SIR: We arrived here near three weeks since. * * * Bo's cousin [Charlotte] we found married to her other cousin, who, by all accounts, was forced by her perseverance into the match. The young man, they say, showed no small reluctance to marry this hideous little creature, and I find that her marriage portion, which they promised to be seven hundred thousand francs, has not been paid yet and I think it probable it never will. They are living with his father near Florence, and she is said to be a vixen. * * * She kept Bo as a resource if she could not find a richer husband, but I can tell her she would have found me rather too sharp to have let him run his head into the noose in the way her present spouse has done, without either ready money or security for the payment in any way. The individuals of this singular family are always cheating each other, and do not verify the proverb of setting a rogue to catch a rogue.

Bo is now with his father, who has contrived to get out of his aged parent almost her whole fortune. It is said that he has spent almost everything she had since his residence near her, that she has given him even her jewels, and that, although avaricious to all the rest of her family, she refuses him nothing. Her children are all naturally quite furious at the injustice she has shown in giving to the most worthless of the race what ought to have been equally divided between them.

In the following letter Jerome gives a description of the lazy life led by the Bonaparte family, and their enormous debts.

ROME, January 25, 1827.

MY DEAR GRANDFATHER: I have been here now about six weeks, and have seen nearly all the members of my father's family who are living.

I am excessively tired of the way of living at my father's. We breakfast between twelve and one o'clock, dine between six and seven, and take tea between eleven and twelve at night, so that I seldom get to bed before half-past one o'clock in the morning. My father does not see much company at present, but during the greater part of the twenty-four hours, the whole of his family is assembled together in the parlor, principally for the purpose of killing time. No one about the house does anything, and I find it impossible to read or study; although my time is not entirely lost, because I have an opportunity of examining the antiquities of Rome, and observing the manners and customs of its inhabitants. The expenses of my father are enormous, and so greatly exceed his means that he has not the power, even if he had the inclination, to do anything for me; indeed, I fear I have very little, if anything, to expect from any of my father's family. I spend but very little money—as little as I possibly can; but I feel that I am living in a style to which I am not entitled, and to which, not being able to support it, I do not wish to become accustomed, more especially as it would totally unfit me for living in America.

* Fesch.



MADAME JEROME BONAPARTE.*

[From the portrait by Gilbert Stuart, painted in 1804, and now in the rooms of the Maryland Historical Society.]

My cousin Charles is expected here every day. He comes from America for the purpose of settling his pecuniary affairs with his father, whose fortune is pretty much like my father's—that is to say, equal perhaps to one-third of his debts. I shall be very glad to see Charles as he will be able to give me some news of America. You have no idea how anxious I am to return home. I was always aware that America was the only country for me, but now I am still more firmly persuaded of it than ever.

The next letter is from Madame Bonaparte, who writes thus to her father:

FLORENCE, 12 February, 1827.

DEAR SIR:

I have been presented at court, and go there once a week. The balls given there are magnificent, and the finest suppers I ever saw. The English Ambassador gives a ball every week, which are also very agreeable. I can give you no idea of the gay-

* These portraits were first printed in SCRIBNER for May, 1875, in Mr. Didier's paper "The Baltimore Bonapartes." The timely interest of the letters, and the recent large accession of readers of the magazine have persuaded us that their republication here will be well received.

Ed. S. M.

ety of this place. The nobility of Florence give, during the winter, a ball a week, which I attended. No one can go to the balls of the nobles except persons who can be presented at court. There are several English families in Florence who give dinners and balls, and my time has been entirely taken up. I was out every night for three months until two in the morning, until I became so unwell that for the last two weeks I have had a fever, which forced me to stay at home. I am now better, and shall commence my amusements by going to a party this evening. I should prefer a child of mine going to court and dancing every evening in the week in good company to his or her marrying beggars and bringing children into the world to deplore existence. In America there are no resources except marriage, and as there was no one there for me to marry, I very naturally sought to quit a place where I was not pleased. I am one of the few persons in the world who owe their position in society to their own efforts, and, really considering everything, I have some merit in having worked my way to the consideration and respect which are shown me both in America and Europe. I worked against wind and tide. My company is sought everywhere, and I have reason to congratulate myself upon the discretion and prudence which have directed my course through life.

I remain, dear sir, affectionately yours.

Madame Bonaparte was destined to be disappointed in all her matrimonial speculations for her son. Two years after his return to America, that is, in 1829, all her high hopes of an ambitious European marriage for Jerome were ended by the sudden announcement that he was engaged and was soon to be married to a young lady of Baltimore. Her letters about this time were filled with violent opposition to the match, and are so personal that only a small portion of them can be published. When the news reached her she wrote to her father:

FLORENCE, 5th September, 1829.

You and the son of Prince Jerome Bonaparte had been told so often by me that I considered a marriage between him and any American woman so much beneath him that I would never, for any consideration, consent to it. I can only repeat that if it takes place I shall declare publicly that I was not consulted, that my consent was not asked, and that my opinion always was and always will be that he ought to live single unless he marries suitably to his connexions in Europe.

In a few days she wrote as follows:

FLORENCE, September 15, 1829.

The residence of Baltimore never was agreeable to me, and after this marriage you must all naturally be convinced that my presence there would be a reproach to all concerned in it, and at the same time very painful to myself. It is natural that I should prefer remaining with strangers, when my own family appear to think so much less of me. Here I pass for a person of sense and proper conduct; there I

am looked upon as a ridiculous old fool, fit only to sew and say my prayers. I have certainly been more respected and more admired everywhere than in my own family. I am consulted by strangers upon their private affairs, and my relations think me incapable of judging for myself.

On the 7th of October she writes from Florence:

You announce to me that my son's marriage was expected to take place in the month of October, which, of course, means this month. I had foreseen that it would be precipitated to prevent my interference. * * * I find, too, that he has been fool enough to marry her without even getting hold of her fortune.

FLORENCE, 27 October, 1829.

DEAR SIR: When my son left Europe I told him never to marry in America, and I have repeated the same thing in every letter to him since. I certainly never would have married any one there after having married the brother of an emperor. He has no ambition, and it has been impossible for me to give him what nature had denied; therefore an obscure existence may be more suitable to his disposition than the brilliant one which I have been always trying to force on him. I shall in future spend my income, buy wood and candles and eating and try to make myself more comfortable than I have hitherto done. My home has certainly not abounded in what is called the comforts of heat, light, and eating and drinking,—all which things I have got out of the public, as well as books, newspapers, etc. I believe that I have pushed the system of economy as far as any one ever did. I shall in future buy a comfortable dinner, and write my notes on fresh paper, instead of the backs of letters, which I have hitherto done to my friends.

I have no other idea of comfort in any other mode of life than in courts, and living with people of rank, and going into company every day. I hate retirement and domestic life, and have sacrificed through life everything to my ambition; therefore it could not be expected that I should ever advise my son to marry in Baltimore.

I was unreasonable in expecting my son to be as ambitious as I have been and shall always be. I however hope that as he has married an American, he will not bring her to Europe, because, if he does, she will never be content in America. The American women who have come here have turned out much worse than the European women, and not one of them of any age has ever been satisfied in her own country after having lived here. I shall try to get the twelve hundred dollars per annum continued by the family, and if anything can extort money out of them, it will be the fear of my tongue. * * *

No one likes money more than I do. I am, perhaps, too avaricious; but I would not, even at my age, marry any one in America with twenty thousand dollars a year, and my pretensions are certainly, or ought to be, much lower than his. * * *

I hope to hear nothing about affections being engaged, because that is a poor excuse. We all know that men's or women's affections may be got over, and that only fools marry for anything but connexions or great wealth. Immense wealth is better than rank, but it ought to be great indeed to excuse a young man of rank forming a misalliance, or, indeed, any alliance. * * *

Mr. Patterson wrote to his daughter that she ought not to blame Jerome for marrying without her consent, and reminded her of her own conduct in relinquishing her family and country, to which she replied :

FLORENCE, 11th November, 1829.

I really wonder that a person of as much sense as yourself can ever affect to blame me for leaving a family who neither admired nor liked me, and, above all, I wonder at you ever having written it to me, because it forces me to tell you that I consider myself as having been always most unjustly and cruelly treated by some persons in my family. The less said about my leaving my country the better,—after my marriage, it was absurd to expect that I could descend from a prince to a trader, and you ought to have sent me to Europe if I had not come. America was no longer a residence for me. * * *

I wanted Bo to make a figure in the world and to live with the great. He has neither ambition nor industry, and the efforts I made to push him on were like rolling a stone up a hill. * * * I toiled for years to convert him into a man of talent, and to inspire him with the elevated sentiments which ought to distinguish the nephew of the greatest genius who ever lived.

I wish him all the happiness consistent with the lot of humanity, and I wish you the repose of conscience which some persons might not feel after having advised the only son of an only daughter, who had been unfortunate through life, to marry against her approbation. * * *

FLORENCE, 21st December, 1829.

DEAR SIR: I tried to give Jerome the ideas suitable to his rank in life; having failed in that, there remains only to let him choose his own course. A parent cannot make a silk purse of a sow's ear, and you found that you could never make a sow's ear of a silk purse. It was impossible to bend my talents and my ambition to the obscure destiny of a Baltimore housekeeper, and it was absurd to attempt it after I had married the brother of an emperor. I had not the meanness of spirit to descend from such an elevation to the deplorable condition of being the wife of an American. * * *

I shall leave my fortune to my son. This is my duty as well as my inclination,—and to his children after him; if he dies without any (I hope that he never will have any), it must revert to my nearest relations. * * *

Very affectionately yours.

Immediately after her son's marriage, Madame Bonaparte made her will, leaving her entire property to her son, saying she felt that "no parent had a right to disinherit a child"; that she would have left him everything had he attempted to cut her throat and failed in the attempt.

FLORENCE, 26th April, 1830.

DEAR SIR: I shall leave this on the 1st of May, and return here in September. My spirits, never good, are now dreadfully broken, but I shall drag on the load of life many years. My income, I shall in future spend. The miserable economy I was obliged to practice has been a great disadvantage to me. * * *

The thought of my son's marriage makes me sick for days at a time. I shall never know a day of peace; all his prospects and mine are now ended.

FLORENCE, December 22, 1830.

DEAR SIR: The fifty dollars per month, which I had been enabled by retrenchments on my table, fire, lights and dress to pay my son, were discon-



JEROME NAPOLEON BONAPARTE ("BO"). [FROM A BUST TAKEN IN 1859.]

tinued when he married, because it would be folly to starve myself any longer for a child whose conduct has convinced both the public and myself of the disregard in which he holds me. I willingly made sacrifices for him and would have deprived myself of anything to place him in the position which both his name and birth had marked out for him. * * *

Placed by my marriage in a rank of life which I have hitherto resisted every temptation to disgrace, I feel it incumbent to appear with decency in those societies where alone I will appear, and my whole income is too small for this purpose. Had my means been more ample not even the contemptuous, unnatural, unjust and disingenuous conduct adopted toward me during the whole process of this marriage could have made me stoop to the mean revenge of suppressing a pecuniary allowance to a child, but I believe that every one who has not made hatred and contempt of me a systematic proceeding must confess that the time has now arrived for me to attend more closely to my interest than my relations have done for me. * * *

After her violent outbreak upon the occasion of her son's marriage, Madame Bonaparte remained silent for some time. Her father reproved her for her long silence and urged her to return home, saying,—“intercourse with our family is, after all, the only chance for happiness in this world.” During this time she removed from Florence to Geneva, where she remained until the autumn of 1833, when we find her once more in Paris.

PARIS, 10 October, 1833.

DEAR SIR: I was obliged to leave Florence on account of my health, which is now perfectly restored. The Princess Galitzin brought me to Geneva, where I lived with her some time. I could

After a brilliant career in Europe of nearly fifteen years, Madame Bonaparte returned to America in 1834, and established herself in the "little trading town of Baltimore," as she



JEROME BONAPARTE.

[From the portrait by Gilbert Stuart, painted in 1804, and now in the rooms of the Maryland Historical Society.]

not return to Florence, because Prince Jerome went there to live, having no desire ever to meet him.

The Duchess d'Abrantes has published twelve volumes of memoirs, where she relates everything relating to the Bonaparte family. She has mentioned me in the highest terms, and has overrated my beauty and conduct. Since the publication she has made my acquaintance. I have refused to give her any anecdotes, either of Prince Jerome or of myself. She has already said enough of ill of him, and more good of my beauty and talents than they deserve.

Dear sir, truly yours, *

E. PATTERSON.

contemptuously called her native city. Instead of creating a *salon*, and making her house the resort of distinguished men and fascinating women, she lived in a boarding-house, seeing little company and spending little money. In this comparative obscurity were passed the last forty-five years of the life of this celebrated woman, whose early ambition had disturbed the imperial dreams of the First Consul,—whose divorce had caused a rupture between Napoleon and Pius VII.,—whose wit and beauty had made her a queen of society.

SUMMER ENTOMOLOGY.*

TRAMPS-AFTER MOTHS AND BUTTERFLIES.

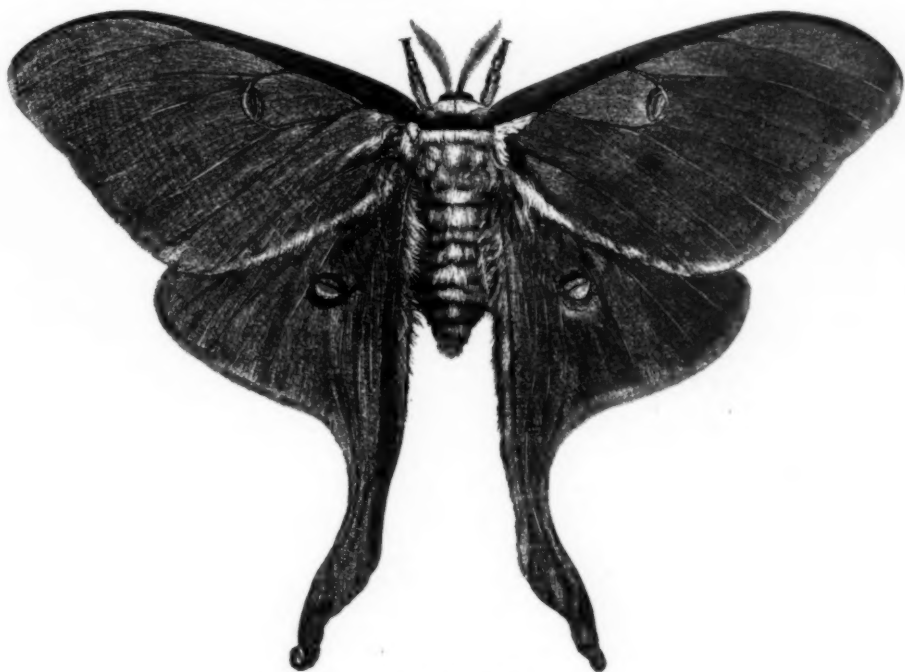


FIG. 1.—LUNA MOTH.

"WILLOWDALE!" shouted the brakeman.

Hurriedly gathering up my belongings, I alighted from the starting train almost into the arms of my old friend and college chum, Dr. Percival, at whose invitation I had come to spend a few days at his country-seat at Willowdale. We had a five-mile drive ahead of us, and consequently abundant time to ask and give all the news. Percival had forgotten none of us, and every item of information that I could give him was valued. As for himself, I gathered that his whole time was devoted to his family, to the management of his estate, and to his favorite study, entomology. On this topic the doctor was a perfect enthusiast, and I inferred from his random confessions that in all weathers he

might be found in woods or fields, in pursuit and study of insect life.

It was not long before I was reminded of Percival's hobby; for, before we had driven a third of the distance between the station and his house, he stopped the horse abruptly, and handing me the reins, jumped from the buggy, and, stepping to the fence by the roadside, removed with great tenderness and care a large moth that was resting beneath the rail.

"It's one of the finest specimens I have ever seen," he said, returning and displaying his prize.

"It certainly is a magnificent bug," I replied. "What do you call it?"

"It's not a bug, but a moth," answered Percival testily. "Remember the difference between a lepidopterous insect and a hemip-

* The beautiful illustrations of this article were drawn from freshly collected specimens by the late lamented Sonrel under the supervision of Mr. Charles L. Flint, editor of "Harris on Insects Injurious to Vegetation." The drawings were all carefully examined, criticised and approved by Professor Louis Agassiz. The engravings, which, it is admitted, have never been equaled in natural history work, were all made by Mr. Henry Marsh for the above admirable treatise, which is now published by the Orange Judd Co. of New York.

terous one. At least, don't display your ignorance to my wife, for she is well informed in these matters."



FIG. 2.—FEMALE OF THE CORN EMPEROR MOTH.

While he was speaking he opened a paneled door in the box under the seat of the buggy, took out a wooden case and, opening it, displayed a number of other insects fastened to the cork bottom of the casket.

"What in the world are you doing, Percival?" I exclaimed, as he removed the stopper from a vial containing a colorless liquid, and poured a few drops on the insect's body.

"Simply etherizing the moth," he replied. "it kills the insect instantly, and thus prevents its spoiling its wings and losing its scales. Isn't it a splendid specimen?"

"It is a beauty; what do you call it?"

"The Luna moth,—*Attacus luna*" [Fig. 1],—he replied, arranging the wings, from which hardly any of the down had been removed. "It is a female, and one of the most perfect specimens I ever captured."

The moth was about five inches wide across the extended wings, and each posterior wing was prolonged over an inch at the hind angle, so as to give the insect the appearance of being what is commonly called swallow-tailed. The color of the wings was of an exquisitely delicate pea-green, and along the front edges of the fore wings, and across the front of the thorax, was a brownish-purple stripe; the legs and outer edges of the wings were also of this color. On each of the wings near the middle, was an eye-like transparent spot which was surrounded by white, red, yellow and black rings. The body of the insect was covered with a soft white down. It was altogether a magnificent creature, and I congratulated Percival on his acquisition.

"How did it happen, Percival, that you discovered that moth hanging by the feet beneath the fence-rail? I should never have noticed it."

"That's because you are not always on

the watch for insects, as I am," replied the doctor; "it would have been strange, however, if I had not seen this one, for it was in plain sight, and it is a wonder that some marauding crow or squirrel did not find it during the day."

"I suppose these Luna moths must be quite destructive," I suggested. "Judging by the size, a few of them could make sad havoc."

"No; the injuries done by this, and one or two allied species, are quite inconsiderable; but, as a rule, the lepidoptera, in which order are included all our butterflies and moths, are among the most injurious of insects; that is to say, they are injurious in the caterpillar form; the matured insects are quite harmless. The young of all butterflies and moths are called caterpillars, and some of them, as you well know, such as the apple-tree caterpillar and canker-worm, are terribly destructive. The larva of this Luna moth lives on the walnut and hickory, and it does no great damage."

Mrs. Percival's greeting, as we alighted from the vehicle, was as cordial as had been her husband's. After I had admired the babies, and congratulated Mrs. Percival on the possession of "two such fine specimens,"—you see, I was fast adopting the scientific vernacular,—Percival showed me to my room,—a most pleasant apartment, commanding a charming prospect of wood and lake and meadow.

"Our Willowdale air is a specific against dyspepsia," said Mrs. Percival at the tea-table, as she helped me a third time to strawberries, notwithstanding my feeble protest,— "and I advise you to fortify yourself well for to-night's hunt."

"To-night's hunt?" I asked.

"Yes; the doctor has been making some insect-lures in the woods especially for your entertainment, and I suspect you will have all the fun you want."

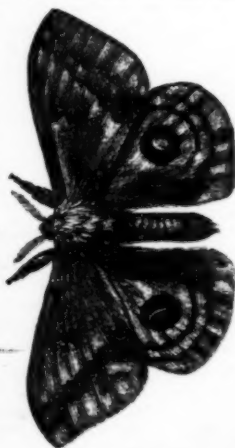


FIG. 3.—MALE OF THE CORN EMPEROR MOTH.



FIG. 4.—THE LOCUST-TREE CARPENTER MOTH.

I fancied I could detect in the eyes of my hostess something decidedly like merriment. The doctor, seeing that I was still puzzled, explained.

"I remembered your penchant for hunting and fishing," he said, "and I thought that a moth-hunt would be a new and interesting experience for you. So I have prepared some lures for the insects, and when it grows dark, we will see what we can capture."

"What is an insect-lure? I am quite ignorant, I confess," I said.

"It is a bait composed of sugar and ale, or sometimes of molasses and rum," replied Percival; "it is smeared over the trunks of trees in the woods; the insects are attracted by the mixture, and all through the night are constantly coming to feed, as you shall have a good chance to see."

Percival and I devoted the hours before the night came on to recalling old times and college associations.

At length he announced that it was dark enough to commence the hunt. He obtained a large lantern with a powerful reflector behind it,—such as hunters call a jack-lantern,—a gauze net for capturing insects, and a box containing all the necessary paraphernalia for securing our captives.

The night was warm, and as there was no moon, the woods, into which we soon passed, were quite dark.

"It is a capital night for our hunt," said Percival, leading the way, "and I hope you will enjoy it."

"I haven't the slightest doubt I shall," I replied, keeping close to him. "I always enjoy anything that seems like hunting, and there is evidently a promise of something exciting ahead of us."

Onward we went for quite a distance, following a cart-road that led through the woods. The lantern cut a swath out of the darkness ahead of us, and the path of intense light by contrast rendered every thing outside of it quite undistinguishable in the utter blackness.

The whip-poor-wills were repeating their plaintive songs, and the tree-toads were answering them in a harsh, wild cry. In a neighboring swamp a host of frogs were uttering their croaks and screams, and occasionally an owl flitted over us, saluting us with his diabolical cry. Numerous night-flying insects, attracted by the vivid light of our lantern, hovered about it. Occasionally, a large moth would dart into the bright space, and at length one came near enough for Percival to capture it by a quick and dexterous sweep of his net. It proved to be a female of the corn emperor moth—*Saturnia Io*, as the doctor called it. [Fig. 2.] It was a beautifully colored moth and measured about three and a half inches across the expanded wings. The fore wings were of a brownish purple, with a brown spot in the middle of each. The hind wings were purplish-brown and at the base somewhat reddish, of which color there was also a curved narrow band near the posterior edge. Within this band was another curved line of black, and in the middle of each was a large round spot of blue surrounded by a black border,

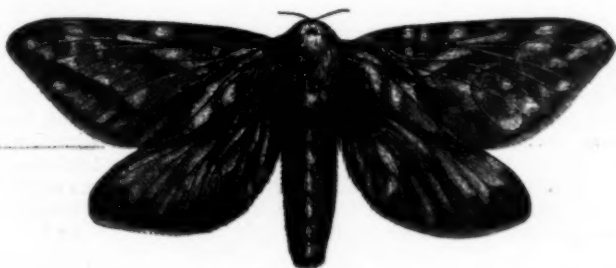


FIG. 5.—SILVER-SPOTTED HEPIULUS.

and containing a small silver-white dash pointing to the inner angle of the wing. On the fore wings were two wavy lines running

number of purplish-red spots so arranged as to form the letters A H."

Guided by the strong light of the lantern,



FIG. 6.—CECROPIA MOTH.

across the wing. The thorax and legs were brownish-purple, and the abdomen was of an ocher-yellow.

The doctor secured the moth in his insect case, after treating it to a dose of ether.

"It is not a rare species," he said, "but it is worth saving; the male is a much handsomer insect. [Fig. 3.] The fore wings are of deep yellow, and on each of them are a

we continued our walk. At length we stopped before one of the trees which the doctor had baited; directing the rays of the lantern upon the trunk, he examined the lure. For a short time not a moth was to be seen, although an abundance of other insects were to be *felt*, as I soon found out, the mosquitoes, attracted by the strong light of the lantern, giving us a warm welcome.

However, as "an undevout astronomer is mad," so is an unenthusiastic entomologist among mosquito stings.

"What's that, Percival?" I exclaimed suddenly, as something that I took to be a humming-bird darted suddenly with whirring wings in and out of the path of light, and around the sweet bait upon the tree. "We've wakened up the humming-birds, I verily believe."

"No, it's not a humming-bird," replied Percival, holding his net in a good position, and then with a quick motion brushing the object of our discussion into the gauzy bag. "It's a moth, one of the locust-tree carpenter moths,—*Xyleutes robinia* [Fig. 4],—so called from their habit, while in the caterpillar form, of boring into the trunks of these and other trees."

As he spoke he held the insect firmly with one hand and poured a few drops of ether on its body; then, opening the folds of the net, he exhibited to view a moth with pointed wings and body; the wings measured about three inches from tip to tip. It was of a grayish color, and the fore wings were irregularly spotted and lined with a darker color. The hind wings were much darker than the others, and near the shoulders were edged with black.

"I did not know before," said I, "that the larvæ of any of the lepidoptera bore in wood."

"Oh yes," replied Percival, "there are



FIG. 7.—THE BLIND-EYED SMERINTHUS.

quite a number that do; some are grubs, and some true caterpillars; they bore long holes in the wood of trees, and in vines and the roots of plants. The larva of the moth that we have just captured is a true caterpillar. It bores through the trunk of the tree in different directions, making a hole in the wood which increases in size with the growth of the caterpillar. These insects are a decided nuisance to timber-growers, as they spoil many valuable trees."

"Yes," I replied, "I should think they might be great bores."

"We occasionally capture an allied species," continued the doctor, "called by Harris the silver-spotted hepiolus—*Hepiolus argenteomaculatus*. [Fig. 5.] It is a beautiful moth; the wings are long, as is also the body; the color is ashen-gray, the fore wings are irregularly marked with spots and bands of darker gray. The hind wings are of about the same color, but are tinged with a yellowish ochre toward the tips. The veins



FIG. 8.—THE SOLDIER MOTHS.



FIG. 9.—THE HARNESSED MOTHS.



FIG. 10.—THE FEMALE OF THE PROMETHEUS MOTHS.

show plainly in both this and the one we just captured. But stand still—don't move! I just caught a glimpse of a large moth in the trees yonder; it is drawing this way."

I stood in eager expectation, for I saw that Percival was all excitement. The immense moth, whose presence had caught the quick eye of my friend, hovered through the foliage of the trees, now appearing quite near, then lost to sight; finally it drew nearer and nearer, and at length hovered

with white. On the fore wings next to the body was a curved white band on a dull red ground. The body was covered with a soft dense down.

"Let us now visit another place," he said, turning down a side path; "perhaps we may find something else that will prove interesting."

"Go ahead, old fellow!" I exclaimed, stumbling after him. "This is fascinating sport, and a few more such beauties as you

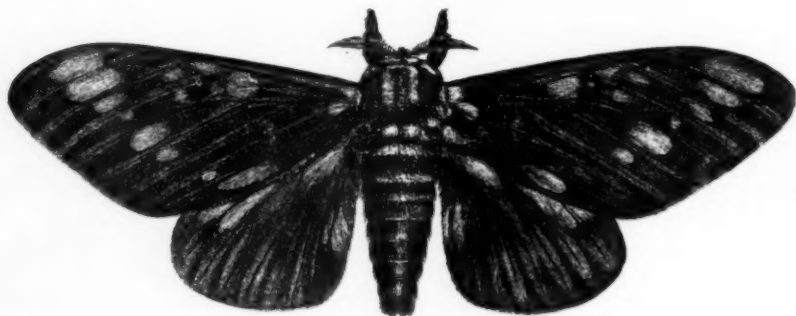


FIG. 11.—THE REGAL WALNUT MOTH.

about the sweet bait on the trunk of the tree. Percival stood still a few moments, and then launched his net and made the moth a prisoner.

A cry of astonishment escaped me as I caught the beauties of the moth, displayed as they were in the vivid light of the lantern.

"What is it?" I asked. "It is certainly one of the most beautiful creatures I ever saw."

"It is the *Cecropia* moth (*Attacus Cecropia*)" [Fig. 6], answered he, arranging the wings symmetrically; "it is one of the largest I ever saw, and a female."

It was all of six inches across the extended wings, and was a larger insect in every way than the *Luna* moth. The body on the upper side was of a reddish-brown color, and on the under side was variegated red and white; the legs were brownish red and there were a number of white rings across the abdomen. The wings were grayish dusky-brown, and the hinder margins were clay-colored; near the middle of each wing was a kidney-shaped reddish spot with a white center and a narrow black border. Near the tip of each of the fore wings was an eye-like spot, black within a bluish-white crescent. There was a wavy reddish band across each wing bordered on the inner side

have taken to-night will convert me into an ardent entomologist."

"Good!" replied the doctor mischievously; "'and while the lamp holds out to burn,' etc. I foresee a promising convert in you,—but here we are."

As he spoke, he turned the rays of the lantern upon the lure before him. A great number and variety of insects were to be seen, hovering about the bait and feeding upon it.

Percival busied himself at once, and many were the specimens he secured. Of course, it is quite impossible for me to remember even a tenth part of the varieties he captured. I can only describe some of the more striking ones.

One of the first that he caught was a quite pretty moth, which he called the blind-eyed *smerinthus*—*Smerinthus excacata*. [Fig. 7.] It was of a brownish-fawn color generally, with the exception of the posterior wings. These in the middle were of a delicate rose-color, and on each of them was a black spot with a pale blue center. The fore wings, when expanded, would measure about two and a half inches from tip to tip; they were spotted, with waves of a lighter fawn or gray color.

"Unlike most of the other hawk moths, or sphinges, to which group this *Smerinthus* belongs," said the doctor, "the insect in the adult or moth form probably does not take any food, its tongue being too short for use. You would be surprised to see the tongue of the potato-worm sphinx, when it is uncoiled. I have taken a specimen with a tongue between four and five inches in length, and there is a Madagascar species that has a tongue over nine inches long. These lengthened members are given the insects to explore the deepest flowers, and suck up the nectar upon which they feed. Most of the species fly with great vigor, and they poise over the flowers by the rapid motion of their wings, almost precisely like the humming-bird, and then insert the tongue into the nectaries. The insect coils it up, when it is not using it, like a watch-spring, and it is stowed away very compactly. The caterpillars of the hawk moths do not spin cocoons, as most of the other moths do; but descend into the earth when their transformation is about to occur. The pupa is naked, and in some species has an appendage like the handle of a pitcher. This *Smerinthus* has a slow flight, and moves about only at night."

Another odd-looking insect was the soldier moth—*Callimorpha militaris*. [Fig. 8.] It was a handsome species; the fore wings were white, with borders of brown and a stripe of the same color from the inner edge to the tip. The hind wings were plain white, and the body white, with the head, collar, and thighs buff-yellow. The wings were not spread when the insect was at rest, but were folded together roof-like at the body. When they were expanded, they measured about two inches from tip to tip.

A curious-looking species that Percival took in considerable numbers was what he called the harnessed moth—*Arctia phalerata*. [Fig. 9.] It was of a pale buff color; the fore wings were marked with two longitudinal stripes of black, and on each wing were four triangular spots of the same color; the sides of the body were reddish, as were also the hind wings next to the body. On each of the hind wings were several spots of black, and on the thorax (the front part of the body) were three stripes, and on the back another, of the same color. The under side of the body was also black. The wings measured about one and three-fourths inches from tip to tip.

"I always make it my business to destroy every tiger moth (as the arctians are called)

that I can," said the doctor, busying himself with his net; "for although this species and the soldier moth may not be particularly destructive, the caterpillars of most members of this group are very mischievous. The salt marsh caterpillar and fall web caterpillar are the larvæ of insects belonging to this family, and you doubtless know how destructive they are. The salt marsh caterpillar not only devours the grass of salt marshes, but even corn, beans, and garden vegetables."

Another splendid moth that we captured—I say *we*, because I had soon caught my friend's ardor, and rendered no little assistance—was the female of the Prometheus moth—*Attacus Promethea*. [Fig. 10.] It was a beautiful insect, and very much resembled the *Cecropia*, but was smaller, measuring but about three and three-fourths inches across the expanded wings. The white lines across the wings and the white spots were not so distinct as on the *Cecropia*. It had many of its characteristics, however; but its colors were generally lighter, and the markings less distinct.

"Well," at length exclaimed Percival, consulting his watch, "I think I have kept you out long enough. It is now twelve o'clock; we'll return to our other lure and see what we can find, and then for home."

We trudged along the path and into the cart-road, back to the tree where he had made his earlier captures. There were numberless small moths and other insects flying about, but nothing that the doctor cared to secure, and we were just on the point of turning away, when, as I glanced upward, I discovered, flitting in and out among the foliage of the trees, what I took to be another *Cecropia* moth; but when I pointed it out to Percival, he exclaimed excitedly:

"By Jove, it is a *regalis*! Keep perfectly still! I must have him, for he is one of the rarest of our moths."

The insect fluttered back and forth through

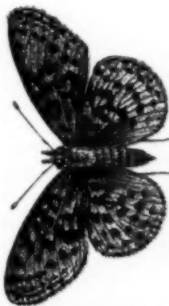


FIG. 12.—BELLONA BUTTERFLY.



FIG. 13.—BELLONA BUTTERFLY.



FIG. 14.—THE CAROLINA SPHINX.

the leaves; but it appreciably drew nearer and nearer, attracted probably by the vivid light of our lantern. At last, when it flew into the open space about us, Percival made a quick swoop with his net, and the game was ours. A few drops of ether quieted its struggles, and, opening the net, the doctor exposed to view the prize of the evening, not a break nor a mar upon wing or body.

"It is the regal walnut moth,—*Cerato-campa regalis*" [Fig. 11],—said Percival, "and a perfect beauty."

The insect measured about six inches across the wings from tip to tip; but the wings being longer and narrower than

except the edge of the collar, the shoulder covers and an angular spot on the top, which were orange red. The fore wings were olive-colored, with yellow spots and veins of broad red lines. The posterior wings were orange-red, each one being marked with two large yellow patches anteriorly, and a row of olive-colored spots between the veins behind. The color was superb.

"Come home!" exclaimed Percival, dashing the perspiration from his forehead. "Come home. This is glory enough for one night."

As he spoke he led the way through the long cart-road out into the avenue, and in a short time he was bidding me "good-night" at my chamber door. It is hardly necessary to say that my sleep was profound. Let any one take such a tramp and go through as exciting a "still hunt" as we did and he *must* sleep.

On the following morning, when the breakfast-bell resounded through the house, it seemed to me that I had but just retired, but glancing at the sun I saw that the morning was well advanced.

After breakfast, the doctor and I adjourned to the piazza, and, lighting the inevitable cigar, we spent an hour of solid comfort. Percival, in order that every moment of my visit might be improved, as he expressed it, had made his plans for a raid among the diurnal lepidoptera—the butterflies, etc.; and he lost no time, certainly, for

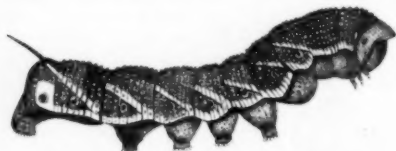


FIG. 15.—THE LARVA OF THE CAROLINA SPHINX.



FIG. 16.—PUPA OF THE CAROLINA SPHINX.

those of the Cecropia moth, the insect did not appear as large. The head and the upper side of the abdomen and the legs were orange-red. The thorax was yellow,

when our cigars were finished he made preparations for the start.

As many who read this article may not know the peculiarities of the different groups of the lepidoptera (insects with four wings covered with minute scales), I venture to present their characteristics as given by Dr. Harris in his admirable treatise on "Insects Injurious to Vegetation." The three sections are distinguished as follows:



FIG. 18.—THE AMERICAN LAPPET MOTH.

"The butterflies (*Papiliones*) have thread-like antennæ, which are knobbed at the end. The fore wings in some, and all the wings in the greater number, are elevated perpendicularly and turned back to back when at rest. They have generally two little spurs on the hind legs, and they fly by day only."

An example of this group may be found in the Bellona butterfly,—*Argynnis bellona*,—two illustrations of which are given [Figs. 12, 13], one with wings spread and the other elevated perpendicularly.

"The hawk moths (sphinges) generally have the antennæ thickened in the middle and tapering at each end, and, most often, hooked at the tip. The wings are narrow in proportion to their length, and are confined together by a bristle or bunch of stiff

hairs on the shoulder of each hind wing, which is retained by a corresponding hook on the under side of each fore wing. All the wings, when at rest, are more or less inclined like a roof, the upper ones covering the lower wings. There are two pairs of spurs on the hind legs. A few fly by day, but the greater number in the morning and evening twilight."

The Carolina sphinx—*Sphinx Carolina* [Figs. 14, 15, 16]—is a good example of this group. The illustrations given are of the perfect moth, the larva, and the pupa; the pitcher-handle-shaped appendage that I



FIG. 17.—THE RUDDLE TIGER MOTH.



FIG. 19.—VELLEDA LAPPET MOTH.

have referred to is seen on the pupa as figured.

"In the moths (*Phalænæ*), the antennæ are neither knobbed at the end nor thickened in the middle, but taper from the base to the extremity, and are either naked like a

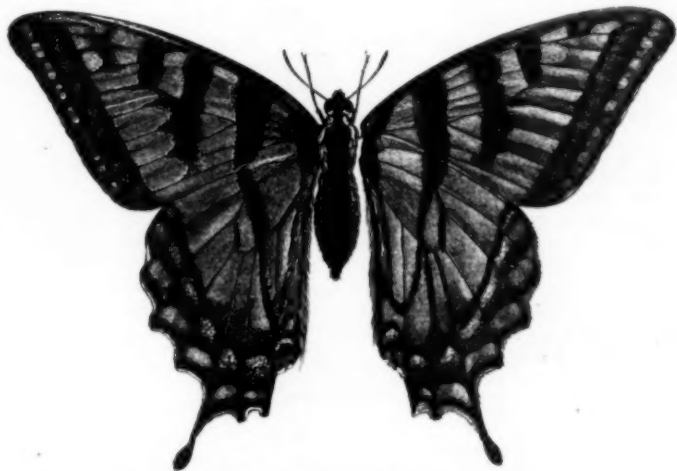


FIG. 20.—THE TURNUS BUTTERFLY.

bristle, or are feathered on each side. The wings are confined together by bristles and

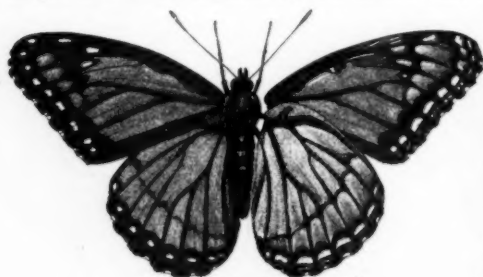


FIG. 21.—THE DISIPPE BUTTERFLY.

hooks, the first pair covering the hind wings, and are more or less sloping when at rest, and there are two pairs of spurs to the hind legs. These insects fly mostly by night."

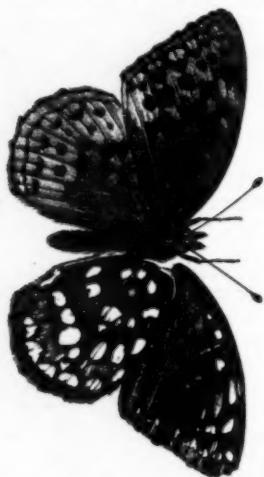


FIG. 22.—THE APHRODITE BUTTERFLY.

The Ruddle tiger moth,—*Arctia rubricosa* [Fig. 17],—the American lappet moth,—*Gastropacha Americana* [Fig. 18],—and the Velleda lappet moth,—*G. Velleda* [Fig. 19],—furnish examples of this group, in addition to those I have already described.

Mrs. Percival promised to join us at "the spring" which lay in the woods about four miles from the house, and we took up our line of march through fields and meadows, and pastures, and orchards, for our point of destination, Percival calculating that the slow progress of an entomological hunt would dispose of the five hours before luncheon.

The doctor paid no regard to the rays of the sun; he seemed to feel or know nothing of fatigue, and almost every moment of his time was employed in swinging his net, and in preparing his insects for the collecting boxes. As for myself, I took things more coolly, and looked on. Among the most beautiful of the butterflies that we caught was the Turnus butterfly—*Papilio turnus*. [Fig. 20.]* This was an elegant, graceful creature, about five inches across the wings. Its color was a lemon-yellow, the wings hav-

ing a broad black margin in which were a row of yellow spots. The front wings had four black bands, and each posterior wing was scalloped and lengthened into a tail near which was an orange-red spot. The body was black above with a yellow stripe, which began at the neck and passed over the shoulders and along the sides of the abdomen. We saw quite a number of these butterflies hovering about pools of water. The caterpillars of this butterfly, Percival said, feed on the leaves of the apple and wild cherry trees, but do no great damage. (The doctor spared none of the more predatory species;

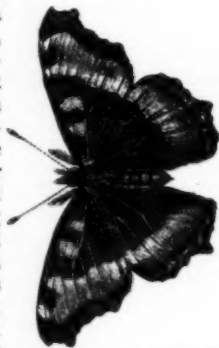


FIG. 24.—MIBERT'S BUTTERFLY.

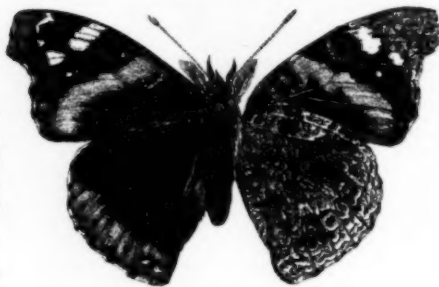


FIG. 23.—THE ATALANTA BUTTERFLY.

* In this illustration, as in a number of the others in this article, the right wing of the insect is apparently detached from the body, and of different markings from the other. It is thus arranged in order to show the markings on the under side of the wing, the left wing showing the upper side.

for he takes great pride in his farm, and worm-eaten cabbages, turnips, and radishes are unsightly objects.)

We found but a single specimen of the Disippe butterfly—*Nymphalis Disippe*. [Fig. 21.] It was a late-hatched insect, the greater number having appeared considerably earlier. It was about three and one-half inches across the expanded wings. Its color was an ochrous-yellow above and lighter beneath; the wings were bordered with black, and in this border was a row of white spots. The veins of the wings were black, and they showed strongly on the yellow ground color; on each of the fore wings near the tip was a long patch of white, and across the hind wings a narrow black band. The caterpillar of this species is not injurious to any appreciable extent, as it feeds upon the leaves of the poplar and willow.

"I cannot understand, Charlie, how it happens that you know what the caterpillars of the different butterflies and moths feed upon," said I, as I held one of his collecting-boxes for him while he secured and pinned a number of specimens that were in his net.

"Oh, the food and habits of most of the species have been ascertained by rearing the caterpillars," he replied, closing the box and continuing his tramp.

"Rearing them! How in the world do you manage that?" I asked. "I should

be the Aphrodite butterfly—*Argynnis Aphrodite*. [Fig. 22.] It was about three inches

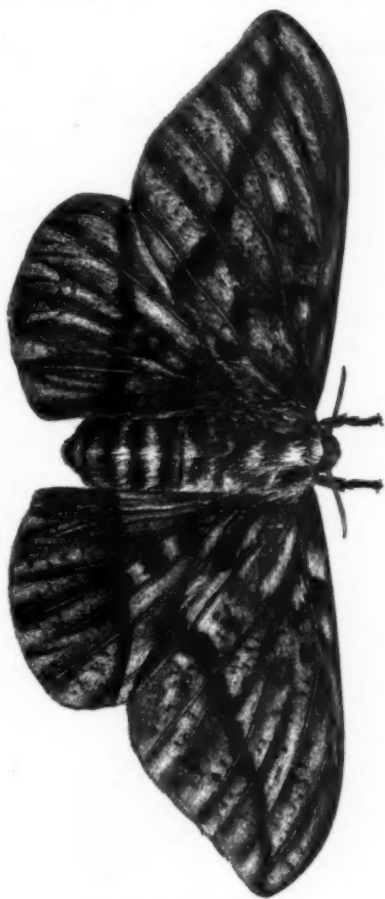


FIG. 25.—THE IMPERIAL MOTH.



FIG. 27.—THE HUMMING-BIRD MOTH.

think it would be no end of labor to raise a lot of different kinds of caterpillars."

"It does require considerable attention, but the work is very fascinating, and it is constantly giving the entomologist interesting and valuable facts."

"I should certainly think so," I responded in a few moments when I rejoined the doctor, who had started off hurriedly for a butterfly that was fluttering from flower to flower before him, and which proved to

be the Aphrodite butterfly—*Argynnis Aphrodite*. [Fig. 22.] It was about three inches across the wings. The ground color was yellowish-ocher; the wings were marked above with a black line near the hind margins. There was a row of black crescents near this line, and a row of black spots between them and the body; there were also on the upper side of the wing a number of large irregular black spots.

On the under side of the fore wings, near the tips, were seven or eight silvery spots, and beneath the hind wings a number

of silvery-white spots arranged in irregular rows.



FIG. 26.—OAK OR FOREST CATERPILLAR.

"Whenever I find a caterpillar that is new to me," said Percival, in reply to one of my inquiries, "I confine it in a breeding-cage, which is simply a wire frame upon which is stretched a muslin covering; or,

or keep a few twigs with their leaves on them in vials of water until the leaves are all eaten. This is continued until the first transformation. It is quite important that these breeding-cages should be kept clean



FIG. 28.—THE POLYPHEMUS MOTH.

if I have not enough breeding-cages, I use ordinary glass jars, with muslin tied over the top. In these I feed the caterpillars daily with fresh herbage of the same kind that they are feeding upon when I find them. For instance, if I obtain a new specimen upon the willow, I give it fresh willow leaves to eat every day,

and sufficiently moist. To effect this, I cover the bottom of them with damp moss, which I renew every few days."

"What do you mean by the first transformation?" I inquired.

"The change from the caterpillar to the pupa or chrysalis form is called the first transformation, and the transition from the

pupa to the imago or perfect insect form is the second transformation."

Here the doctor gave chase to a handsome butterfly, which he called the *Atalanta* butterfly—*Cynthia atalanta*. [Fig. 23.] It measured across the extended wings about three inches; the wings were black on the upper side, with two or three large white spots on the anterior ones near the tips, and a band of orange-red across the middle. The hind wings had a wide band of the same color, in which was a row of small black spots; beneath, the wings were beautifully variegated and marked with indistinct spots and figures.

"The eggs are laid by the adult insects," continued the doctor, "and usually upon or near the favorite food of the species; and shortly after the eggs are laid, the parent dies, its mission having ended."

"It must be very interesting," said I when Percival had finished, "to watch all the changes of these insects. I don't wonder at your ardor in the science. There is one thing I never understood, and that is the manner in which the cocoon is spun by the caterpillar; it must be a very curious operation."

"It is," replied the doctor. "There is a small conical tube in the middle of the lower lip of the caterpillar from which the silk exudes in a sort of sticky fluid which hardens as soon as it is exposed to the air. Some species, such as the silk-worm, make a large quantity of silk, while others but very little."

"How does the moth get out of the cocoon—by gnawing out?" I inquired.

"No, the moth has no biting apparatus, although the caterpillars have strong cutting jaws. The moths and butterflies are provided with tubular tongues through which water and dew and the honey of flowers are sucked up by the insects. When the moths are ready to escape from the cocoon a peculiar acid exudes from their mouths, which acts upon the fibers of the silk, and permits the insect to burst out."

"I should think we might keep some of the more attractive ones as pets," I said after a short pause, during which Percival busied himself with fresh captures.

"That is often done," he replied. "It is a common thing for the house-cricket to be kept in a little cage by country people in the South and West, and in Massachusetts the katy-did is also kept as a pet. In Japan, as I learn from Humbert's 'Japan and the Japanese,' all the houses have cages made

of bamboo bark, constructed on elegant models, and containing large butterflies shut up on a bed of flowers; even grasshoppers are there confined in this way, and the natives take great delight in their monotonous stridulations."

During the doctor's account of the caterpillars, he caught two or three specimens of the Milbert's butterfly—*Vanessa Milberti*. [Fig. 24.] It was a neat and graceful insect, measuring about two and one-fourth inches across the expanded wings. The color above was black; near the hind margin of the wings was a broad orange-red band, and on the posterior wings was a row of pale crescent-shaped spots of blue. Near the tip of the fore wing was a small white spot, and about the middle of the wings in front were two spots of the same reddish color as the bands. The wings beneath were brown with a pale band near the edge. The caterpillars of this species live on the nettle.

During one of my halts, as I was reclining on the green turf beneath a splendid oak, while Percival was busy with his net in a neighboring meadow, I discovered one of the most interesting insects that we found during the day. I was gazing upward, lazily watching now a drifting cloud, then a bird that perched in the branches above me, anon idly following the motions of a squirrel that danced and capered on a broad limb that hung down from the trunk nearly to the ground; suddenly my eye caught what I thought was a dead leaf, hanging to the trunk of the tree, but I soon discovered it to be a large moth clinging by its feet to the rough bark. I called to Percival, telling him I had made a discovery, and that he had better hurry or the prize would vanish. He soon joined me, and upon my pointing out the insect, uttered an exclamation of delight, and in a trice the moth was fluttering in his net.

"It is the imperial moth,—*Dryocampa imperialis*,"—he exclaimed, "and a splendid specimen."

The insect was soon quieted, and I gazed with delight upon our prize. [Fig. 25.] The body was yellow, running into purple-yellow on the back. The wings, when expanded, measured about five inches from tip to tip. They were of a yellowish color, with irregular markings and spots of brownish purple; across each wing was also a band, and at each shoulder was a considerable patch of this color.

"What does the caterpillar of this species feed on?" I asked, as we left the tree.

"On the leaves of the button-wood," he replied. "It does no great mischief, for the reason that it is not at all abundant. There is an allied species, *Dryocampa senatoria*, however, the caterpillars of which [Fig. 26] often occur in great numbers on the oak, and they do great injury; they swarm together in hundreds, and sometimes completely defoliate the trees. These caterpillars are black, with four narrow yellow stripes along the back, and two on each side. They are naked, and on each ring of the body have six sharp points, or thorns, and on the top of the second ring are two which are long and slender, appearing like horns. But we must hurry; Mrs. Percival must by this time be waiting at the spring," and he hastened forward to a grove across the meadow, which was our point of rendezvous for luncheon.

At length our appetites were satisfied, and, lighting our cigars, the doctor and I displayed our captures to Mrs. Percival, who commented upon them with intelligence and enthusiasm. As the horses were being harnessed, I rambled about among the trees. On entering an open space in the grove, I found a patch of columbines, which, though it was late for them, were in full bloom. I was on the point of collecting some for Mrs. Percival, when suddenly what appeared to be a humming-bird darted among them, and poised with a humming sound above the open flowers. I called to Percival, and said:

"Last night my humming-bird proved to be a moth; but I think there is no doubt that this is a bird, for moths, you say, don't fly in the day-time."

"It is nevertheless a moth," exclaimed the doctor, seizing his net and approaching cautiously.

After dodging about after it a few minutes he succeeded in making it a prisoner.

"It is the humming-bird moth—*Sesia pelagius*," said Percival, displaying his prize. [Fig. 27.] "It is one of the few moths we have that fly in the broad daylight, even in the brightest and hottest sunshine."

The little fellow was a beauty, and one would hardly imagine it to be a moth. It was nearly two and a half inches across the wings. The color of the thorax above was brownish olive, and the body—except the two first segments, which were light purple—was purplish brown. The wings were transparent in the middle, and were bordered with brown; the breast was creamy white, and the posterior part of the body ended

with a bunch of fine hairs, like a flat brush. After we had examined the insect all we wished, the doctor allowed it to escape, and the little creature darted away like a flash.

"Well," I exclaimed, "I confess to not knowing 'a hawk from a hand-saw.' Hereafter, I'll be sure that my humming-bird has feathers before I pronounce on his identity."

During the ride home our conversation naturally ran on entomology, and Percival gave us a long and interesting account of the Chinese silk-worm.

"It is strange," I remarked when he concluded, "that we have no native silk-worms in this country. What a superb cocoon the caterpillar of the *Cecropia* moth would spin!"

"We have quite a number of silk-spinning species," replied the doctor, "and one or two of them are valuable; the others make a silk that is either too weak or of insufficient quantity, or the caterpillars are too delicate to be reared artificially. All the *Bombycidae*, of which the *Cecropia* is a good example, spin silky cocoons; there is but one, however, that is of much value. It is the *Polyphemus* moth—*Attacus Polyphemus*. [Fig. 28.] It is a large moth, measuring about six inches across the wings. Its color is a dull yellowish ochre shaded somewhat with black. The wings are ornamented with a transparent, eye-like spot; the spots on the fore-wings being surrounded by rings of black and yellow, and those on the hind wings by a large bluish-black spot which extends upward toward the base of the wings. The front of the thorax is traversed by a narrow grayish belt, and across the wings are two parallel bands or belts, the outer one reddish and the inner one black. It is a quite handsome moth, though not so gayly colored as the *Cecropia*. The caterpillars feed principally on the leaves of the oak, though they eat the leaves of the elm and some few other trees; they are hardy and easy to rear, and their silk is abundant and strong and of excellent quality."

"If that is the case," I said, "why does not some one go into silk culture in this country with this native species. I should think that with such an abundance of food as we have available the business might be made profitable."

"It is perfectly practicable," replied Percival, "but it is not followed to any extent here save as an amusement. Mr. Trouvelot, now of Cambridge, Mass., has given more time and attention to this matter than any one else in this country, and his investiga-

tions have given us exceedingly interesting and valuable facts. At one time he had at least a million of the worms feeding on bushes which were covered with nets to protect them from the birds; he had, as he expressed it, 'five acres of woodland swarming with caterpillar life.' The moth comes out of the cocoon in early summer, and, after mating, the female lays her eggs on the under side of the leaves. She lays several hundred and they are scattered one or two or three at a time. The worms, when first hatched, are quite small, weighing but one-twentieth of a grain; but they grow very rapidly, according to Trouvelot, eating in the fifty-six days they require to mature about three-fourths of a pound of leaves, each! The silk of the cocoon is easily manipulated, and there is no reason why we may not sometime expect to see native silk culture as a large and prosperous industry in this country.—But we are home again, and we will taboo entomology until tomorrow, or you will become tired of me and my 'bugs.'

"Not in the least," I replied, as we alighted from the carriage and entered the house. "I am a convert to your science,—an enthusiastic one, I assure you,—and I mean to keep you talking on it until I return to the city."

As many of those who read these pages may desire to collect specimens, I will give a brief description not only of the instruments that Percival took with him, but of all that ordinarily constitute an entomologist's outfit.

The nets usually employed are the sweeping net, the lepidoptera net, and the water net. The sweeping net is made of cotton cloth, which is fastened to a strong brass ring or hoop a foot or more in diameter. This ring is securely affixed to a strong handle four or five feet in length. The lepidoptera net is made of Swiss muslin or silk gauze, attached to a cloth binding that is sewed around a ring or hoop of from twelve to eighteen inches diameter across the opening. This ring is also made of strong, unannealed brass wire. The handle of this net should be five or six feet long, but light enough to be used freely with one hand. The water net is made like the sweeping net, but is constructed of grass-cloth, or other coarse material. The sweeping net is used only for beating bushes and sweeping across the tops of grass and herbage, from which the insects are brushed or shaken into the mouth

of the net. The lepidoptera net is too delicate for this rough usage, and is employed only to capture the insects while they are on the wing. The water net is used for water insects and larvæ.

The collection boxes vary in size from those small enough to be carried in the pocket of the collector to those a foot or more in width and length, which are suspended from the collector's shoulder by a strap. Any light box will answer the purpose, provided it is not less than two inches deep in the clear. On the bottom inside is glued a layer of soft sheet cork, or—better still—a layer of the pith of corn-stalks, the pins on which the insects are impaled being quite easily thrust into this material. The butterflies and moths, as soon as they have been killed by the application of a few drops of ether or refined benzine, are impaled on insect pins thrust through the thorax, and the points of the pins are then pushed into the lining of the box, and the specimens are thus kept from jostling about.

When large, heavy species are captured, they are placed temporarily for safety in triangular envelopes, the edges of which are then folded over them.

Beetles and most other insects, as soon as caught, are dropped into small bottles of alcohol, where they are kept until the collector returns home. Delicately colored species of beetles, however, should not be left long in the spirits, but should be placed in the collecting box. Beetles are impaled through the right side of the body, the pin passing through the right elytron, or wing-cover, and coming out between the second and third pair of legs. Most of the other insects, when large enough, are pinned, like the lepidoptera, through the thorax. Those which are too small to be pinned should be gummed neatly upon triangular strips of thin mica, and the pins may be passed through these strips.

The setting-board for lepidoptera, etc., is made by fastening two thin strips of pine, a foot or more in length and two inches in width, upon two uprights, which serve as supports. Between these strips is a space of about a half-inch, to receive the body of the insect, and the pin is thrust through a thin sheet of cork that is glued underneath the pine strips along the open space.

The wings of the insects are then spread out in a natural position upon the upper side of the setting-board, and are kept in place by narrow strips of card-board, through which are thrust pins into the pine to hold them.

From two to six weeks, according to the size of the insects, are required to dry the specimens thoroughly, so that they will retain the positions into which they are put. The insects are finally placed in the cabinet or exhibition-boxes, which are made in a variety of forms and styles, according to the taste of the collector. If cabinets are used, the drawers should have tight-fitting glass covers; and if boxes are employed, the covers should fit perfectly, so as to exclude the dust and small predacious insects, which devour the cabinet specimens.

The boxes and drawers should be neatly lined with sheet cork, over which should be pasted white paper; and the specimens should be arranged in rows and labeled and numbered as systematically as possible.

It is desirable that all the specimens should be pinned at a uniform height; and the more care taken in the arrangement of a collection, the more attractive it is to those who examine it. Cabinet specimens should be kept from the light as much as possible, otherwise their colors will soon fade.

THOMAS MOORE.

(MAY 28, 1879.)

A LORD of lyric song was born
A hundred years ago to-day;
Loved of that race that long has worn
The shamrock for the bay!

He sung of wine, and sung of flowers,
Of woman's smile, and woman's tear,—
Light songs, that suit our lighter hours,
But oh, how bright and dear!

Who will may build the epic verse,
And, Atlas-like, its weight sustain;
Or solemn tragedies rehearse
In high, heroic strain.

So be it. But when all is done,
The heart demands for happy days
The lyrics of Anacreon,
And Sappho's tender lays.

Soft souls with these are satisfied;
He loved them, but exacted more,—
For his the lash that Horace plied,
The sword Harmodius wore!

Where art thou, Brian, and thy knights,
So dreaded by the flying Dane?
And thou, Con, of the Hundred Fights?
Your spirits are not slain!

Strike for us, as ye did of yore,
Be with us,—we shall conquer still,
Though Irish kings are crowned no more
On Tara's holy hill!

Perhaps he was not hero born,
Like those he sung—Heaven only knows;
He had the rose without the thorn,
But he deserved the rose!

For underneath its odorous light
His heart was warm, his soul was strong;
He kept his love of Country bright,
And sung her sweetest song!

Therefore her sons have gathered here
To honor him, as few before,
And blazon on his hundredth year
The fame of Thomas Moore!

AMERICAN MUSEUMS OF ART.

It is not my purpose in this paper to refer in detail to the numerous museums now in more or less successful operation in this country, some of them, like the Metropolitan Museum in New York, and others, exercising a powerful influence upon the knowledge and taste of the public, many others doing good preliminary work in art education. My desire is chiefly to suggest how many smaller cities and towns may found museums of great practical value and comparatively small cost, each of which shall become a popular educator, the center of a beneficent and widespread interest.

First of all, the builders of museums should provide accommodations to correspond with their quality. It is not a question of a night's entertainment for a passing traveler, for whose delectation we spend vast sums in rearing inflammable palaces, gorgeous with upholstery and overflowing with a riotous luxury, but of the permanent safe-keeping of our immortals. A museum should therefore be constructed, primarily, to insure safety and good exhibition; secondly, to be of itself an exponent and lesson of the fine arts to whose service it is dedicated. The shell or skeleton of the edifice, suited to its predestined contents, can be built at a moderate cost, while its outward garb and architectural decoration may be rightly left for future generations to complete. It is a serious mistake to exhaust the liberality of the first donors on the outside of an incompleting building with but little provided for its interior; for it operates as a wet blanket on the nascent enthusiasm for art to find instead of a museum amply filled as far as it goes with valuable objects, an ambitious, spasmodic architectural effort,

open to criticism, and too heavily weighted with debt or cost of completion to give much hope for a long time of being able efficiently to fulfill the purposes for which it is intended. Much better it would be to follow the example of the trustees of the Metropolitan Museum of New York and secure a complete series of special art-objects, even if exhibited for a time in temporary quarters, than to erect a costly fragment of an edifice doomed to remain for an indefinite period a standing apology for the poverty within.

A museum, however, once started on any scale, invites gifts. Every contribution becomes a challenge for another, so that giving to a popular institution grows contagious. The giver of a valuable object rightly is proud to see his name recorded in companionship with that of its author, sharing in the beneficence of genius, by making it literally the common property of mankind. In the late exhibition of mediæval art held at Lucca, Italy, premiums were awarded to the owners and preservers of valuable works; a novel feature, but not without reason as stimulating their conservative appreciation. Probably there is not a large-minded traveler but is ambitious to carry back to his own country examples of those arts which most distinguish the foreign from his native land and give it special renown. He would be spurred to greater liberality in knowing that there is a museum ready for his acquisitions where at his option they can be deposited in sympathetic companionship with their fellows, each gift assuming greater importance as it becomes a valued link in the chain of a great artistic whole.

A modern museum aims to present an

entire epitome of the art-phase of human life. Hence every object, even of homeliest use, in which exists complete or partial idealism, either as pure creative or representative art, simple ornamentation or elaborate decoration, finds its proper place in it. The war-clubs, *tapas* and gourds of the Polynesian are no longer rude curiosities, but instructive specimens in their ornamental designs, of the innate tendency of the so-called savage to bestow his first thought and most patient labor on gratifying his eye rather than pampering his body. The passion for art, both in the untutored and the highest cultivated mind, alike dominates the physical appetites, because in one form or other it is the type or symbol of an ideal perfection for which, in some fashion or other, every soul thirsts. Only two things ever get the better of it, and then but momentarily, viz: religious fanaticism, viewing every æsthetic longing as a snare of Satan, and the equally stupid conclusion that whatever does not absolutely minister to physical wants is unnecessary and useless.

A great museum should be organized on a scale that shall provide for the systematic collection and appropriate exhibition of every nation's art, little as well as great, chronologically arranged, and divided into its diverse departments and schools; and yet massed so as to present an effective, æsthetic whole, emphasized by giving masterpieces the places of honor, while the grouping of the collection shall be such as to facilitate study and comparison. This is not an easy task, for it implies the services of a corps of immaculate experts in all branches of art, not easily to be gotten together in the largest capitals of Europe. In time, however, a museum educates its own officials, if they are faithful to their duties. Meanwhile, a general acquaintance with art-history, aided by special technical knowledge, combined with a nice discrimination in arranging objects harmoniously together with a main eye to æsthetic effect and artistic law, is indispensable to preserve such an institution from becoming a wearisome, ill-sorted, incongruous heap of miscellaneous objects, to their common detriment and confusion; while their best care and preservation needs varied professional acquirements, equal to a royal college of physicians and surgeons.

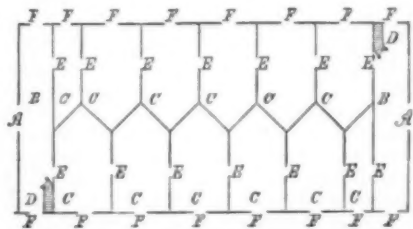
The formidable requirements as to funds and organization of a first-class museum need not at all hinder the establishment of lesser ones suited to the wants and resources of small cities. No country can

expect to maintain many of the former, but the latter are within the means of moderate-sized towns, or even villages. They would also form useful auxiliaries to the large museums, by cultivating and spreading artistic feeling to the remotest parts of the country, and thus preparing the community at large for their better support and appreciation. As almost every town now has its town-hall or public library, or is contemplating its erection, there would be no special extra expense in devoting one or more rooms in either building to the reception of gifts of art or such pictorial commissions as may be executed of local interest, illustrating the patriotism and renown of its citizens. In mediæval times, churches, town-halls, and private dwellings, too, were liberally adorned after this fashion. The topics of sculpture and painting, notably the former, were, however, taken more from religious than civil or domestic sources. Art speedily became the universal language of joy and good-will, softening the asperities and enmities of a cruel, self-seeking age, just as, more than a thousand years before, it had performed the like service for the classical peoples. If the great American nature be destined, as it would seem to be by the logic of events, to follow in the same track, it must begin its career by inculcating its citizens with a love of art guided by the fruits and experiences of its predecessors in this path of civilization, and fostered by commissions for the adornment in sculpture and painting of buildings of architectural pretensions and public uses, taking the themes from the purest and noblest sources of their own feelings and convictions. And if we are to arrive at the ultimate goal of a great national art, we must foster it as it comes, in full conviction that it will gradually exalt itself to its highest functions by ascending, step by step, from its lowest. Each town, therefore, can do good service primarily to itself, and, secondarily, to the nation, by beginning a museum of art, even in a small way, free to all, and recording the virtues and deeds of its best citizens in hues and shapes that shall most forcibly and agreeably incite the disposition to emulate them.

The Winn Library of Woburn, Massachusetts, is a practical illustration of a right example in this direction. The ample bequest of Mr. Winn provides for a museum of art, on a modest scale, in connection with the books. Besides a legacy of pictures, from which the trustees can, if desirable, select the best and dispose of the others, a portion of

the income from the general fund can be devoted to the acquisition of works of art most likely to be of interest and service to the town.

Economy in building, while rightly adapting the means at disposal to the desired end, becomes an important consideration in all similar enterprises. With this in view, I venture to submit a rude design, which, for a small museum, yields the most wall-space, best light, and completest security on a given area, combined with simplicity of form of edifice and convenient division into necessary rooms for the proper isolation of different qualities and epochs of art. The



PLAN OF DIVISIONS OF THE FIRST STORY OF A MUSEUM BUILDING TO ECONOMIZE WALL-SPACE AND SECURE THE BEST SIDE-LIGHT.

A. Main entrances. B. End galleries. C. Series of rooms for paintings, sculpture and other objects of art. D. Staircases to second story, containing large galleries lighted from above. E. Passages draped with curtains. F. Side windows to be glazed with ground glass.

architect is left to make its proportions harmonious and to expend, internally or externally on decoration, little or much, as circumstances shall warrant. In any case, plain, solid masonry, with fire-proof cement floors, arched or not, are indispensable. Let us suppose a certain town has acquired several hundred paintings of various periods, as many sculptures and casts, and a fair collection of the minor arts, such as bronzes, faience, pottery, glass, tapestries, ancient furniture, etc., and wishes suitably yet cheaply to accumulate them to good advantage for public study and enjoyment. For this purpose, an oblong building, shaped after the accompanying plan, having a basement for necessary offices and studies, with the first story divided into a series of rooms of irregular dimensions, according to the nature of the contents, opening into each other and all having the same shape, would give the greatest possible wall-space for side-lights from spacious windows, with least obscurity from shadows or direct front lights. Paintings and sculpture, as well as

the minor objects, could be well arranged in such rooms, for side-lights often suit them as well or better than any other. At one end or both there could be a gallery the entire width of the building, suitable for busts, engravings, photographs, drawings, etc., and communicating with the double series of rooms between those destined for the chief objects. When funds admit of it, a second story, lighted from the top, should be added, divided into a few large halls or left in one, as required, for the hanging of larger pictures in general, or to give more space below to the other contents and uses of the museum. Staircases leading from either end gallery would give easy access to the greater halls, which being lighted from above could be of regular shape. If the irregularity of those below be an objectionable feature as to general symmetry, the compensation would be found in increased wall surface and better light at the extreme ends for the objects there shown.

A building, of this simple, economical, constructive plan could be erected in sections, and as needed indefinitely extended in parallelograms forming hollow squares, or court-yards between them, useful for massive objects, as more room was needed inside for the more fragile works. All wall partitions should be fire-proof, and to economize space, as thin as the requisite strength will admit. As a sufficient protection against fire, these partitions and the doors might be lined with one-eighth inch thick asbestos mill-board. This substance possesses special advantages as a background for pictures and other works of art. Even if soaked with kerosene it will not burn, and it is virtually indestructible in any common flame. Being an atmospheric non-conductor it serves to keep a room warmer in winter and cooler in summer, thus helping equalize the temperature, an important object in a museum. As it is a purely mineral substance, it does not harbor insects or generate noxious odors. Its natural color is a soft, neutral tint, very favorable in itself for art-objects; but it can be colored with warm tints if required. An absorbent and not a reflector of light, as are most wall-papers, it does not fatigue the eye or dazzle it by contrast with the object placed against it. Supplementary to museums on this scale, there might be formed art-clubs to aid in their general management and purpose, with committees to take charge of special departments.

If investments in art do not, like other

enterprises, directly beget reproductive material capital and increase in corresponding ratio the moneyed wealth of the country, they do so indirectly by their influence on every industry to which beauty lends additional value. Besides this advantage, there is another collateral one of equal consideration: These museums attract myriads of visitors of the best classes, whose necessary disbursements largely enrich the community which founds them, and become a prolific incentive to new business enterprises and industries.

Since the opening of the South Kensington Museum, about twenty years since, up to October 20, 1877, it has received 16,698,008 visitors, a large number of whom were non-residents of London. Yet these indirect material benefits, vast as they be, are but secondary. The chief gain comes from the effect on *mind*. Museums stimulate the intellectual capital of a country to active reproduction in numberless ways that affect profoundly the character and welfare of the people.

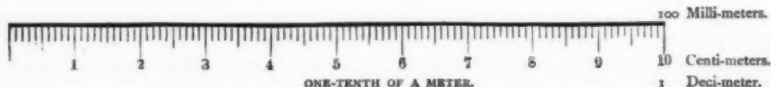
THE METRIC REFORM.

A REVOLUTION in the humble matter of weighing and measuring, which affects every man, woman, and child in the United States, is now making quiet progress. We are entering upon the transition stage, for we have in partial use two discordant sets of weights and measures. One is the medley inherited from Great Britain and used here from the beginning of our national existence; the other is the metric system, the gift of Continental Europe, predestined, from the time when our Constitution was adopted, ultimately to supplant its rival.

The First Congress passed a vote, 15th January, 1790, calling upon the Secretary of State for a "plan or plans for establishing uniformity in the currency, weights and measures of the United States." In his very able report in reply, dated 4th July, 1790, Thomas Jefferson said: "The experiment made by Congress in the year 1786, by declaring that there should be one money of account and payment through the United States, and that its parts and multiples should be in a decimal ratio, has obtained such general approbation both at home and abroad, that nothing seems wanting but the actual coinage to banish the discordant pounds, shillings, pence, and farthings of the different states, and to establish in their stead the new denominations." He proposed two plans for weights and measures.

One was a simple revision of the existing practice: defining our foot with reference to a pendulum rod; establishing a bushel of $1\frac{1}{4}$ cubic feet, equal to 8 new gallons, for both liquid and dry substances; making the ounce the weight of $\frac{1}{160}$ of a cubic foot of water, and abolishing the troy ounce and pound and the avoirdupois drachm. The other scheme was a purely decimal system, to be founded on a unit of length equal to $\frac{1}{36}$ of a cylindrical iron rod oscillating in seconds. The cube of this length was to be the "meter" or unit of capacity, and the weight of water it would hold was to be the new ounce, equal to the weight of the silver dollar. Neither of these alternative suggestions produced any practical effects.

A very similar proposition, made at the same time by Talleyrand in the French Constituent Assembly, resulted in the metric system. A decree of 8th May, 1790, sanctioned by Louis XVI., 22d August, requested the king to write to His Britannic Majesty asking the British Parliament to concur with the French Assembly in fixing an invariable standard based upon pendulum experiments, to be conducted by the *savants* of both countries. Great Britain did not join in the movement, but several other nations did take part in the slightly different scheme which was actually adopted. A system of the simplest kind was prepared for the com-



mon use of the whole world; and to avoid offending local prejudices, it was not connected with any existing metrology. The unit of length is the meter, $\frac{1}{10}$ of which, decimally subdivided, we have just shown.

The unit of weight is the gram, the weight of four cents' worth of our subsidiary silver coinage introduced in 1876. The abridged table on the next page exhibits the character of the system. Annexed to it are the old measures which best correspond with the metric units. Their average variation from exact equivalence is a little over ten per cent.

The alleged merits and defects of the metric system have been warmly discussed. The disputants have ransacked the store-houses of physics, mathematics, history, antiquities, law and social science, in search of ammunition; and have fired a great deal of shot outside of the real battle-field. With regard to the basis of the system, for instance, it has been repeatedly asserted and repeatedly denied that the meter is one ten-millionth part of the earth's quadrant.

On one side is the fact that it was so established by an elaborate meridian survey made expressly for the purpose at the time of the French Revolution. The exciting circumstances under which the task was accomplished arrest the attention. It was conducted by the astronomer, Delambre, who set out under the protection of a royal proclamation; but as the king was soon deposed and beheaded, Delambre became an object of grave suspicion as he traveled about, carrying strange implements and making signals from the hill-tops. He had to explain the principles of geodesy to the natives, and was occasionally arrested when they were not satisfied with his account of himself. Spires were particularly useful landmarks, for many of them had been located by a former survey; but in one region the revolutionists, having an especial grudge against church-towers, had thrown most of them down. When Delambre stretched a white cloth upon a tower to make it more conspicuous for his observations, it was taken for the emblem of a counter-revolution, and he had to put a red stripe on one side of it and a blue stripe on the other, to appease the village patriots. Robespierre and others constituting the Committee of Public Safety compelled him to drop his labors when half finished, alleging that the work ought to be intrusted only to men known for their republican virtues and their hatred of kings. But perseverance finally conquered all difficulties, and the devoted spirit with which the

work was pursued, and the high degree of accuracy attained in its results, alike compel the admiration of opponents.

On the other hand, some later investigators have thought that the actual standard meter is shorter than was intended by about as much as the rule lying on a machinist's work-bench is shorter than the same rule when carried in his pocket and expanded by the warmth of his body. It is said that the earth's figure is irregular; that the length of a single quadrant is not certainly known by the measurement of one-seventh part of it in France and Spain; that other quadrants are of different lengths; and that, in selecting the basis of a system, instead of any one of an infinite number of quadrants, it would have been better to choose the earth's axis of rotation, which is unique. One ten-millionth of the earth's semi-axis is a hair-breadth longer than twenty-five inches. This leads the way to speculations that have less substantial foundation. The supposition has been made that the Hebrews had just that measure; that it was used by divine inspiration in the construction of the Great Pyramid (in addition to other Egyptian cubits, which plainly appear to have been in the builders' hands); and that one purpose of that majestic monument is the preservation of a standard of weights and measures, to abandon which is sacrilegious. Here are involved researches into the wonderful lore of a forgotten civilization, which must deeply interest the thoughtful student.

But what has this to do with our daily weighing and measuring? Few men expect to measure through the earth, or from the equator to the pole, or concern themselves about errors that can only be detected by the microscope. Neglecting the foregoing, therefore, and a variety of other entertaining and instructive arguments, the practical reasons for and against using the metric system here and now may be arranged under five heads:

1. *The metric system is decimal.*

FOR. It is therefore superior for computation. A considerable part of the money which it costs to keep the accounts and do the business of the country would be saved by its introduction. It is unnecessary to argue at length as to the enormous advantages of a decimal progression; for they are made familiar by means of coinage to everybody, excepting only the subjects of Queen Victoria, throughout the civilized world.

ABRIDGED METRIC TABLE.				Corresponding old measures.	
Myria-	means 10,000				
Kilo-	" 1,000				
Hekt-	" 100				
Deka-	" 10				
Deci-	" 0.1	METRIC LENGTH.	METER.	YARD.	
Cent-	" 0.01		DECI-METER.	HAND (4 inches).	
Mill-	" 0.001		CENTI-METER.	BARLEYCORN.	
			MILLI-METER.	1-32 OF AN INCH.	
Corresponding old weights.		Volume of water which has metric weight and fills metric capacity measure.			
	METRIC WEIGHT.		METRIC CAPACITY MEASURE.		
(Gross) TON.	TON (metric)	1 Cubic meter.	KILO-LITER.	TUN.	
Standard weight of BARREL OF FLOUR.	QUINTAL (metric)	0.1 "	HEKTO-LITER.	BARREL (31 1/2 wine gallons).	
(Net) QUARTER.	MYRIA-GRAM.	0.01 "	DEKA-LITER.	PECK.	
(Av.) 2 POUNDS.	KILO.	0.001 "	LITER.	QUART (wine).	
(Troy) 1/4 POUND.	HEKTO-GRAM.	0.0001 "	DECI-LITER.	GILL.	

AGAINST. Currency is largely a matter of computation, and is a different affair from weights and measures. The natural division of material things is not decimal, but is by halving and quartering. Even in coinage the 20-cent piece, which is a decimal of a dollar, recently proved to be very unpopular, while the 25-cent piece, which is a quarter of a dollar, is in constant use.

FOR. In weights and measures, as in coins, people can use $\frac{25}{100}$ and avoid $\frac{20}{100}$ if they wish. The United States 20-cent coin was unsatisfactory for the simple reason that it was made so much like a 25-cent piece as to be frequently mistaken for it. There is no complaint of the 2-cent piece, the 2-dollar note, and the double eagle, and no demand for a 25-dollar bill or a 2 1/2-cent coin. The 2 1/2-dollar gold piece circulates readily, but so also does the 3-dollar gold coin.

AGAINST. Decimal subdivision is not peculiar to the metric system. The Chinese, who of course invented everything before it was dreamed of by outside barbarians, have long used a decimal system of coinage, weights and measures. About twenty years ago Sweden adopted a complete decimal system based on her old foot and pound. If that is all we want, our easiest way to get it will be to follow her example. Indeed, for some purposes such a practice has been established. Land surveyors have for some centuries used a "chain" divided into 100 "links," and 10 square chains make an acre. Railroad engineers have preferred a chain of 100 feet, decimally subdivided.

FOR. In proportion to its numbers the engineering profession now is one of the most prominent in urging the adoption of the metric system. Last year the Boston and Providence Railroad set up a row of stone posts two kilometers apart along its whole line. Sweden voted in 1876 to abandon her decimals of a foot and a pound, and adopt the meter, and the change will be accomplished in a few years; for, with decimal subdivision, the metric system combines other merits.

2. *The metric units of length, area, volume and weight have very simple relations to one another.*

FOR. In this respect they contrast very favorably with the confusion among our old units, as will appear from two or three illustrations.

There are 100 square meters in an ar of land; how many square yards are there in a square rod?

There are 10 hektoliters in a cubic meter; how many bushels are there in a cubic yard?

The pressure of the atmosphere is 1.033 kilos on a square centimeter, or 14.7 pounds on a square inch. To express this pressure as a head of water, move the decimal point one place and we have 10.33 meters as the equivalent height of water column by the metric system. How is the number of feet of water computed by the old method?

If a man wants to know from how deep a well he can raise water with a common suc-

propose naming it a quart, which it is not, instead of calling it what it is, a liter, would be an insult to the intelligence of the American people.

AGAINST. Nevertheless the effete despotisms of the old world have frequently found it best in introducing the system to label the new units permissively and temporarily with old familiar names. Witness Belgium, Holland, Germany, Austria-Hungary, Greece and East India.

4. *The metric system is international.*

FOR. Adopted first in France toward the close of the last century, it has been successively introduced by the governments of nearly all the nations in Christendom. Among the people of several of these nations the old standards are already driven out of use, and in the others they are gradually disappearing and are destined soon to be obsolete. Under the Postal Union treaties of 1874 and 1878 the metric system is now used for international postal purposes by the United States, the whole of Europe, and large parts of Asia, Africa, South America and Oceania. In the vast and increasing intercourse between nations, the advantage of uniformity would be felt in travel and study abroad, in reading foreign literature, and in importing foreign goods. The mere saving in the computations of the custom-house which are due to diversity of standards would furnish a powerful argument on the score of economy. We are now trying to introduce our manufactured goods into foreign markets; if we can make money in that way when our standard sizes and units of measurement are not in harmony with those of the buyers, we could make more money after adopting their system.

AGAINST. The two important exceptions to the list of metric nations are Great Britain, with whom we have about as much to do as with all the rest of the world put together, and Russia, whose measure of length is already commensurable with our foot. We shall lose on the one hand what we gain on the other.

FOR. Fifty years ago Great Britain introduced new capacity measures; they are completely independent of her former standards, which the United States still retains. All our capacity measures, therefore, by which a considerable portion of our commerce is measured, are now entirely at variance with those of the mother country.

The correspondence of Russian measures with ours does not relate to weight nor the

usual capacity measures, but only to length and the square and cube of length, and it is inconvenient enough there. Peter the Great, after his experience in British dock-yards, made the Russian sagene equal 7 feet; that makes the verst 3,500 feet, the archine 28 inches, and the verchok $1\frac{3}{4}$ inches.

Sometime both Russia and England will change to the metric system, and that time can be hastened by prompt action in this country, which will leave them isolated if they postpone further. Just before the outbreak of the recent Turkish war an imperial commission which had been sent to Paris to examine, reported in favor of the introduction of the metric system into Russia. In Great Britain, by an act of Parliament of 1864, metric terms may be used in contracts and are defined to mean given amounts of British imperial measure; according to a heated opponent, the advocates of the adoption of the meter for use in that country are a strong and increasing body. In India, British measures of length are little used, and those of weight and capacity scarcely at all. The Indian Weights and Measures Act, 1870, establishes the metric units for ultimate adoption throughout British India, and leaves it to the discretion of the Governor-General in Council to fix the date for their use in the several districts of the country, and by particular offices or corporations, or by persons engaged in any specified business or trade, without forbidding the use of British imperial weights and measures. It is expected that metric weight and capacity measures will be introduced earlier than the metric unit of length. Some of the Indian state railways, however, have been constructed with a gauge of one meter. A Canadian Act of 1871 empowers the Governor in Council, whenever he shall think it necessary, to provide metric standards for verifying weights and measures in the Dominion. For years Canada has used a decimal coinage like ours. Two ordinances for the introduction of the metric system into the Mauritius and its dependencies (the Amirante Islands, the Seychelles and Rodriguez), after notification by the Governor in Council, bear date of 28th December, 1875.

AGAINST. It will be safer not to calculate upon any reform England may make until after she shall have made it. She has not yet established a decimal coinage, though that is a matter completely in the hands of the government and has been discussed for years. Her people are thus unable to appreciate justly the merits of decimal weights and

measures; yet their active concurrence will be required for a thorough metrological reform. Within fifty years she kept her exchequer account in Latin with Roman numerals, and a century ago it was kept on notched sticks; in 1834, in burning up those old tallies she set fire to her Houses of Parliament and destroyed her standard yard, pound and gallon. She was a century and a half behind her neighbors in adopting the Gregorian calendar.*

FOR. The delay with the calendar has been largely due to religious prejudice against the Roman pontiff. But even if England were not likely to abandon her mediæval weights and measures, that would not justify us in adhering to them. She continues to use pounds, shillings and pence; and our substitution of dollars and cents has introduced a great deal of friction into all our commerce with the mother country; yet we honor our ancestors for their action, and we ought to follow their example.

5. *The change will cost a great deal of trouble and some money.*

AGAINST. This is the one great argument against the introduction of the metric system, or any other improvement. Our knowledge of weights and measures is not the mere learning of a few tables by rote. It is our familiarity with certain standards in all of our thoughts and transactions which involve quantity. We conceive of the weight and dimensions of our own bodies, our provisions of food, supplies of clothing, materials of building, of the areas of our farms and house lots, the quantities of our commercial and manufactured products, the distances we travel,—in fact, we conceive of nearly everything that enters our minds, in terms of certain units of weight and measure. To oblige every human being in the United States to forget all that he knows now about size and quantity and begin anew, thinking of everything in terms of unfamiliar units, which are at variance with all our written records of the past, also to manufacture every thing in new standard sizes, is a prodigious undertaking. It is an old saying that you may conquer a people, but you cannot conquer their language. It is now proposed to alter the language of quantity, which is a part (though a small part) of the Queen's English. All our measuring imple-

ments, every yard-stick, quart pot, and bushel basket, the beams of all our scales, every nest of weights and the very gauges of our machinery are to be laid aside for new ones, which, until we become accustomed to them, will seem awkward. This will require a downright outlay of money which is not to be submitted to for any fanciful or merely sentimental reasons.

FOR. This would be a plausible objection if the thing had never been done; but the same transformation has lately been made in central and southern Europe with such success as ought to win over the most hard-headed "practical" man. It is no merely sentimental gain; it is a substantial benefit. In ways already pointed out it will be well worth all that it will cost. The cost will depend very much on the manner in which the improvement shall be made. The remainder of this paper will consider what is the best method of accomplishing this reform.

Although the coming change is necessarily somewhat abrupt in its character, like many others which occur in the natural world and in human society, it may be made, as most of them are, less sudden in fact than appears to a superficial view, by being carefully prepared for in anticipation and gradually perfected after seeming completion. The duration of the interval of chaos should be made as short as circumstances will allow by general and simultaneous action during a period fixed in advance, and thoughtfully provided for. In Europe the nominal time of the metrological reform has varied considerably in different countries, but has generally been from three to seven years.

Suppose everybody to know upon evidence commanding the utmost confidence, that this change is certainly going to be made on or before some particular date, for instance, December 31st, 1889. The largest part of the scale-beams, pocket-rules, taps, dies, and machine-tools, of which such a bugbear is made, will be worn out before that time; and in making renewals previously any man of forethought can manage to avoid much extra expense. The clothier can buy a new measuring wand one meter long, with a yard marked on the back for temporary use. Having this continually before his eyes he will gradually become accustomed to it, and will learn to think in meters as well as in yards without any great effort. The grocer may get a double scale-beam, such as Fairbanks & Co. have been selling for

* Russia is about adopting it now, it is said, having had enough of reckoning at twelve days variance from the rest of the world.

many years to their South American customers, with pounds marked on one branch and kilos on the other. By thus bridging over the chasm between old and new, he can change his language almost as easily as his coat. New machine tools can be built upon the metric basis and used on any work which is to last long after 1890, while the old machinery continues in service for several years in the completion or repair of former work, and for every thing of a temporary character, which will not outlive 1890. In this way the change was made about ten years ago at the watch factory at Waltham, Mass. Experienced machinists say that they could do likewise with but little trouble. If everybody must have new tools, the shops that make the tools would appear to be special gainers by the reform. If, however, there should be extraordinary expenditure required of them, their customers would have to repay it in increased prices. Some individuals suffer peculiar hardship from any improvement; the introduction of labor-saving machinery throws handicraftsmen out of employment; by the adoption of new weights and measures to save mental labor, some few persons, of necessity, will be injured (professional agitators, if nobody else); but the progress of civilization is not on that account to be stopped. The proposed interval prior to 1890 would afford time for all necessary state legislation. The general government has already supplied accurate metric standards to the several states; they ought to distribute copies, if they have not yet done so, to their local officers, and to make the usual provisions for verifying the actual weights and measures of trade according to the metric system. Time would be allowed also for the preparation of all the technical and other books required for the new system, the apothecaries' pharmacopœia and tables of data, reference manuals, and literature of whatever kind, adapted to the wants of any profession; some of this work is already done. If every man were looking forward to the change as inevitable, and studying how to make it as light a burden as possible to his own business, various ways would be contrived to introduce the new terms gradually into every department; measurement, standard sizes, price-lists and advertisements would all conform to the new *régime*; and the difficulties, which on a general view appear almost insuperable, would be surmounted in detail by a moderate expenditure of money, patience and sustained effort.

The effort ought to be made during an assigned period of years, not whenever it suits individual whim. The latter method is now being tried in some places; in the United States of Colombia (formerly New Granada), the process, still incomplete, has been going on for thirty years or so with sadly picturesque effect; and if our people do not know enough to use a better method, we shall probably drift or be driven into making the change in just that way, with vastly more annoyance and expense than there is any necessity for. So the Erie Railway, which formerly had a broad gauge, has laid down a third rail and now runs trains of both gauges, and could run a mixed train; eventually the outer rail will be taken up, and the road will be of the usual gauge only; but the change thus made will be at the extra expense of maintaining for a series of years about 660 kilometers of rails.

To produce simultaneous action requires that every one shall be seasonably notified and shall be ready. The work of preparation is already going on bravely in the item of teaching children the new weights and measures in school; but it would go on a great deal more merrily if the tax-payers could know that their children would have to use nothing else in practical life a dozen years hence. The schools can do a great deal directly and indirectly. But alone they can never accomplish the desired change; the country will always contain adults who have forgotten much that they learned in school, and it will ever be hard to drop what the business of life makes familiar, and to take up something strange.

It will be a very simple matter to circulate all necessary information about the metric system, and the time allowed for its introduction. We have, moreover, much immigration and importation of books and merchandise from lands where it is already in use, and this will greatly facilitate its introduction. By contrast, it is interesting to observe the difficulties which were experienced in former days of popular ignorance, when the system was new and untried, and had to meet not merely the usual prejudice against any thing strange, but also the patriotic spirit which regarded it as a badge of subjection; for Napoleon's victories carried it forcibly into the Netherlands, Westphalia, Spain and Italy, which promptly rejected it when relieved of the French yoke, but were glad to adopt it again in later years on its merits.

In some cases a compromise has been

resorted to, as in Switzerland, where a foot is established equal to 30 centimeters and divided into 10 thumb-breadths, each equal to 3 centimeters; there is also a pound equal to 500 grams, and capacity measures equal to 15 liters and $1\frac{1}{2}$ liters. The result of this is that the Swiss metrology has yet to go through a second metamorphosis in order to come into complete harmony with its neighbors. In France, a similar scheme, though somewhat different in detail, was legalized from 1812 to 1840, and was known as the *système usuel*. In ducal Hesse a still different modification was formerly used, and in Baden there was one like the Swiss. Throughout Germany and Austria for customs purposes the zollfund, equal to a half kilo, was long in use; and it is now the standard in Denmark. In this connection may be quoted some extracts from the report of a committee of the Federal Parliament in 1868, on the project of a law for the regulation of weights and measures for the North German Confederation:

" * * * If the new [metric] system is to be adopted at all, it must be introduced in its full integrity; any half measure now must necessarily lead in a short time to further changes, and consequently new annoyances to the public. The introduction of the zollfund in 1856 may be held up as a warning in this respect. The great inconvenience and cost of its introduction will be in every one's recollection; all was willingly borne because it was universally acknowledged to be a real step in advance, the new pound being exactly equivalent to a half kilogram. But if, instead of this half step, the whole step had then been taken of adopting the French kilogram as unit of weight, we should have been saved the present necessity of once more changing our weights. "

"To those who at the time advocated the entire adoption of the kilogram, it was objected that it differed too much from the unit of weight in common use, and that it was desirable to approximate the new pound as closely as possible to the old one. Now the truth lies just the other way. The transition from one weight to another is much easier when the new weight differs so greatly from the old as to preclude the possibility of confounding one with the other. Thus the old pound of 28 loth weight has doubtless often been confounded with the new pound of 30 loth, but certainly never with the kilogram of 60 loth. Nor will a new name be in any way detrimental, but rather advantageous."

The body which in our country should naturally express the popular will in favor of any change of standard, and should determine and make known the period at which the change can be accomplished, is plainly Congress. The Constitution expressly pro-

vides that "the Congress shall have power" to "fix the standard of weights and measures." The House of Representatives has had a standing committee on coinage, weights and measures for about fifteen years past. The Act of July, 1866, permitted the use of the metric system. The committee then said in their excellent report accompanying their bill for this purpose:

"The interests of trade among a people so quick as ours to receive and adopt a useful novelty will soon acquaint practical men with its convenience. When this is attained,—a period, it is hoped, not distant,—a further act of Congress can fix the date for its exclusive adoption as a legal system. At an earlier period it may be safely introduced into all public offices, and for government service."

That earlier period is now at hand; for, in the last Congress, the committee, after obtaining the opinions of the officers of the executive departments, presented an elaborate report (7th January, 1879), which closes with an earnest recommendation of the early enactment of a law to establish the metric system in the post-offices and custom-houses July 1st, 1880. It is already in use on the Coast Survey and in the Mint, for foreign postal purposes and by the medical department of the Marine Hospital service, but these uses do not bring it much in contact with the people. Its use in 40,000 post-offices, and in every custom-house, arsenal, dock-yard, fort and military post, in all contracts for government work and every purchase of government supplies, would carry the new system among our whole population more effectively and economically than any other instrumentality.

It ought not to be overlooked, however, that for any government to adopt the new weights and measures entirely in advance of the readiness of its people for the change would produce a lamentable state of confusion; such as may now be seen in several of the republics of Central and South America. Their citizens, who are but imperfectly qualified for the onerous duties of self-government, continue to use in private transactions a variety of old standards, generally of Spanish origin, in spite of legislation expressly prohibiting them, while the official business of the governments is conducted in terms of the metric system. In order to secure decisive action by our Congress, the people must make known their desire for it; and the simplest course is to petition Congress.

THE WHIP-POOR-WILL.

WHEN apple-branches, flushed with bloom,
 Load June's warm evenings with perfume,
 And balmier grows each perfect day,
 And fields are sweet with new-mown hay,
 Then, minstrel lone, I hear thy note,
 Up from the pasture-thickets float—

Whip-poor-will!

Thine are the hours to love endeared,
 And summoned by thy accents weird,
 What wild regrets—what tender pain,
 Recalls my youthful dreams again,
 As floating down the shadowy years,
 That old refrain fond memory hears—

Whip-poor-will!

The garish day inspires thee not;
 But hid in some deep-shaded grot,
 Thou like a sad recluse dost wait
 The silver hours inviolate,
 When every harsher sound is flown,
 And groves and glens are thine alone,

Whip-poor-will!

Then, when the rapt, voluptuous night
 Pants in the young moon's tender light,
 And woods, and cliffs, and shimmering streams,
 Are splendid in her argent beams—
 How thrills the lover's heart to hear
 Thy loud staccato, liquid-clear,

Whip-poor-will!

Whence comes thy iterated phrase,
 That to the wondering ear conveys
 Half-human sounds, yet cheats the sense
 With vagueness of intelligence,
 And, like a wandering voice of air,
 Haunts the dim fields, we know not where,

Whip-poor-will?

 FLOWERS FOR SONG.

COWSLIPS for "Palm-Leaves"!—'tis a mean return:
 Poor weeds for harmonies divine!
 But all that made thy music burn
 Into my heart so, lady mine!
 Lives in these brook-born cowslips—yellow things!
 Yet their loved name a green remembrance brings;
 And dear as Dante's green-winged angel, she
 In my remembrance must forever be,
 Who sang my numbers by the silent sea.

TRINITY PARISH.



REV. MORGAN DIX, D. D., RECTOR OF TRINITY CHURCH.

WHEN the province of New Amsterdam was ceded to the British, in 1674, and Sir Edmund Andros was appointed governor,

the Church of England in America, as the Episcopal denomination was then called, held its religious services in a little chapel near the Battery, previously occupied by the Church of Holland. A larger building becoming necessary, Colonel Fletcher, Andros's second successor, was one of its most zealous projectors, despite the opposition of dissenters; and in 1697, the fifth year of the reign of William and Mary, a royal grant was made of a parcel of land "in or near to a street without the north gate of the city, commonly called Broadway." The title given with the grant was "The Parish of Trinity Church," and among the earliest wardens were Morris, Reade, Ludlow, and others, whose names are perpetuated in some of the most populous and familiar thoroughfares. The society was small, select, and *a posteriori*, loyal and orthodox to a very respectable degree. Its letters and messages to the parent church across the sea breathed a spirit of filial devotion and gratitude, and evoked reiterated assurances of support and appreciation, which were substantiated by a further grant, in 1705, of "Queen



INTERIOR OF TRINITY CHURCH.

Anne's Farm," a tract of land that extended from Vesey street to Christopher street, along the North River. One has only to look at a map to see the enormous value this gift has acquired in the development of

the first resident rector was the Rev. Mr. Vesey, who qualified himself for the purpose, and for fifty years continued as incumbent. The second rector was the Rev. Henry Barclay, who had been missionary to



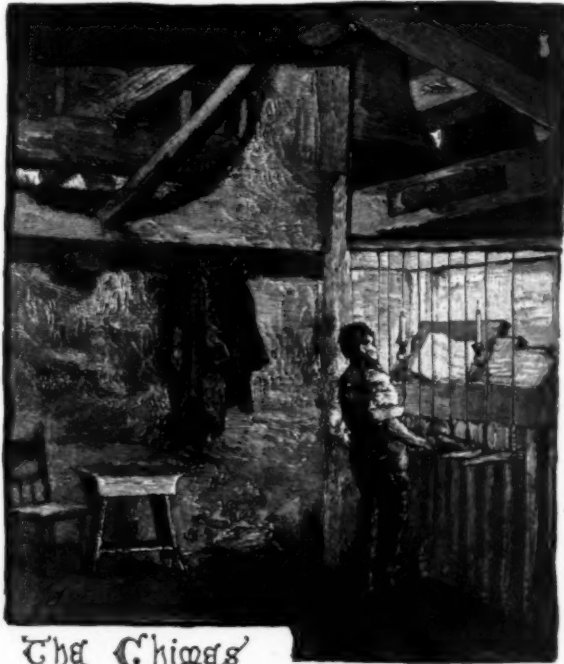
TRINITY CHURCH.

the city; perhaps no other real estate of the same extent in the world is worth the same price; but the rents that could be collected from it 174 years ago were not great, and Trinity Parish at that time stood in need of money.

The members were persevering, and those who had not money to give contributed labor to the new building that was required. When completed, this was 148 feet long, and 72 feet broad. The steeple was 175 feet high, and the interior was "ornamented beyond any other place of worship in the city." Nominally, the church was presided over by the Bishop of London, and

the Mohock Indians at Albany; and a few years after his induction, the congregation needed additional accommodations, although it is said that the proportion of Episcopalians to dissenters in the colony was as one to fifteen. St. George's Chapel was built at Van Cliff's and Beekman's streets, burned in 1714, and rebuilt the following year. The next addition to the parish was a charity school, offering a gratuitous education in the English and classical branches, complemented, of course, with religious training according to the Episcopal Church; and in 1763, the building of St. Paul's was begun.

As the influence and wealth of the church



The Chimes

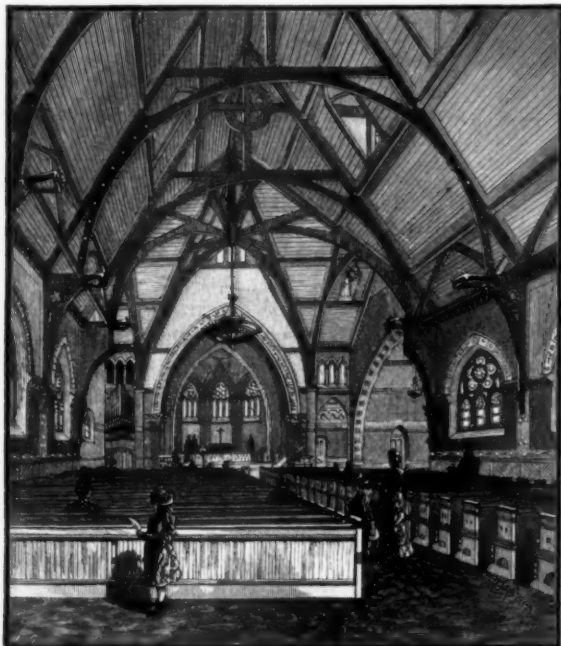
were improving, the Revolution was brewing. The inauguration of Washington took place at the City Hall, and he afterward attended service in St. Paul's Chapel, where he had frequently received communion; but in October, 1776, Mr. Inglis, one of the assistant ministers of Trinity, wrote to the London Society for the Propagation of the Gospel in Foreign Parts, that all the Episcopal missionaries in New Jersey, New York, and Connecticut had proved themselves to be loyal subjects of the king, and that, although they had been unable to prevent the rebellion, they had checked it to some extent. In the succeeding disorder, the ministers and missionaries limited their teachings to the gospel, without touching upon politics; but their conduct gave great offense. They were everywhere threatened, often reviled, and sometimes treated with brutal violence, as we learn from the Rev. William Berrian, in his "History of the Parish." To officiate publicly without praying for the king and the royal family, was against their oaths and consciences, and one by one they were compelled to close their churches. The most defiant position was taken by Mr.

Inglis, who, when Dr. Auchmuty, the rector, had retired from the city, persisted in prayers for the king, although he was loudly cursed and threatened in the streets. One morning while he was officiating, 150 armed men marched into the church with muskets loaded, bayonets pointed, and drums and fifes playing. The women in the congregation screamed and fainted; it was a terrible sight to see the gleaming weapons inclosing the pulpit of old Trinity; but the parson was not to be intimidated. Death was of less account with him than duty, and he did not omit a word of the ritual. The Lord was beseeched to behold with favor "our most gracious sovereign, King George," and the valiant pastor was not molested. The church was afterward closed, however, until the return of the British army, when it was re-opened; but within a few days it was burned down, together with the rector's house and the charity school. Dr. Auchmuty died in 1777, and was succeeded by Mr. Inglis, who, under the new dispensation, was soon banished to England, his estates being confiscated, while the Rev. Dr. Samuel Provoost was put in his place. Provoost

was an American educated in England, and with his incumbency the ritual was revised; the occupant of the throne shared any benefits that might come from the general prayers for all men; and in place of the old collect for the king, a new one made a special

present structure—the third on the site—was completed in 1846.

There are few persons, believers or infidels, who do not possess an affectionate interest in "Old Trinity." Its history is in a measure the history of the city; for over two hun-



INTERIOR OF ST. AUGUSTINE'S.

plea for the President of the Republic. The church was rebuilt on the original site in 1778, and pews were reserved for the President, the governor of the state, and members of Congress.

Both Grace Church and St. Mark's were largely assisted by Trinity, although they are not included in its parish; and in 1807 St. John's was completed, on a site which was then wild and marshy, surrounded by bushes and bulrushes, and at some seasons a favorite resort for gunners. The splendid grant of Queen Anne's Farm was held in no niggardly spirit. Besides maintaining its several chapels, St. Paul's, St. George's, and St. John's, and its charity school, the parish fostered many other societies by liberal gifts of land and money, and the ground upon which Washington Market stands is a part of its largess. The church built in 1778 was found to be unsafe in 1839, and the

dred and seventy years its worshippers have included the most honored citizens, many of whom have gone from their seats in the nave to graves in the burial-ground outside. It has survived many changes, many vicissitudes; and in meditative retrospect we see many pictures in the vista of its past. The first building was outside the upper gate of the city, and now the site is near the lower extremity. Under the King and under the Republic it has existed for one purpose, and that is expressed when, above the noise of the traffic that plies around it, the chimes in its high steeple ring out their melodious proclamations. In this vicinity Broadway is crowded to excess. From early morning until late at night busy or careworn business men hasten past the church or pause to talk in its shadow; and the fine Gothic pile of brown sandstone commemorating the generations

associated with it can hardly fail to awaken a thought of more enduring things than the commerce which impels these eager merchants, brokers and bankers. The door is usually open, and from the feverish traffic of the street one may transfer himself to the calm of the interior, where the light is softened here, or enriched there, by filtration through the stained glass windows. The oaken pews have flowers and scrolls carved upon them, and the groined roof is supported by colonnades of sandstone, which in the mellow atmosphere lose all the obduracy of their material. The altar and reredos are wrought out of white and red marble, which, combined with Caen stone, mosaics and cameos, give the effect of folds over folds of lace.

Dr. Benjamin Moore, Provoost's successor, was succeeded as rector at his death by Dr. John Henry Hobart. Hobart was succeeded by Dr. William Berrian, who was succeeded in 1862 by Dr. Morgan Dix, the present incumbent, and thus in about one hundred and eighty years, the church has had only nine rectors, each holding the office, on an average, for twenty years.

The growth of the parish is not less interesting on account of its extent than on account of the variety of the work which it has included. St. George's was removed "up-town" from Beekman street many years ago and became independent of the parent church; but other additions having been made as the congregations increased or an opening for a new mission appeared, the parish now contains seven churches,—one located as far south as Governor's Island, another as far north as Twenty-fifth street, another as far east as Houston street near Second avenue, and a fourth as far west as Varick street. Trinity Chapel, in Twenty-fifth street near Broadway, was opened in 1855; St. Cornelius's Chapel, on Governor's Island,

in 1868; St. Chrysostom's, at Seventh avenue and Thirty-ninth street, in 1869; and St. Augustine's, the second building in East Houston street, on September 2d, 1877. Each of these is a handsome and commodious structure, except St. Cornelius's, which is small, being intended for the garrison only; and in each all the seats are free, excepting Trinity Chapel, in which the pews are rented. St. Paul's, in Broadway at Vesey street, and St. John's, in Varick street, are almost free, the only exceptions being in cases where the ownership of pews has existed for generations and the vestry has no control. But no pews have been sold by the corporation within the memory of living man, and the possession of those held by inheritance is



REAR OF ST. AUGUSTINE'S CHAPEL.



FRONT OF ST. AUGUSTINE'S.

constantly sought by purchase. At all evening services in all the seven churches, at all special services, and on all week-days, the pews are invariably free. Then besides these seven churches, which are wholly maintained by it, the parish contributes largely to the support of eighteen others, and to various missions; the total amount annually disbursed outside the parish being nearly fifty thousand dollars. Trinity Infirmary in Varick street is maintained by the parish for the sick poor, for whom a burial-place also is pro-

vided at Newtown, Long Island; two thousand dollars are annually paid for five beds in St. Luke's Hospital, and there are five scholarships at Trinity College, Hartford, to which the rector nominates, the holders being relieved from all expenses during the course, except such as are personal. Each of the churches has a Sunday and a day school connected with it, and various guilds for the promotion of the religious and secular welfare of the poor.

It may, perhaps, be said, when the enumeration of its good works is complete, that the parish can well afford to be liberal,—that mere consistency compels it to devote a part of its enormous resources to other purposes than its own. But the revenues of the church are grossly exaggerated in the

popular estimate. It is forgotten that for many years—a century, at least—Trinity gave its land to most of the institutions and churches that asked for it, not limiting its beneficence to the city nor to religious purposes, and in the case of St. George's alone contributing over a quarter of million dollars in money and lands. As a matter of fact, very little of the original grant remains in possession of the church, and some sixteen years ago when the corporation had become involved in financial embarrassments through its generosity, a change was necessary in the policy hitherto pursued,—a change which took effect in restricting gifts to the limits of the parish, excepting cases in which poor churches had become dependent on the corporation and could not exist without continued assistance. The entire income from all sources is about five hundred thousand dollars annually, a large part of which sum is expended on the estate; about one-tenth is given to poor churches outside the parish, and not one dollar is hoarded. Over one hundred thousand dollars a year are paid into the city treasury for taxes on ground used for secular purposes, beside a large sum for assessments.



THE ILLUMINATED CROSS, ST. AUGUSTINE'S.

popular imagination. If the parish had held to itself all the land included in Queen Anne's grant, its financial condition at the present time would be touched by the exciting assertion that "the wildest flight of the human mind could not conceive a sum equivalent to the wealth of Trinity Church." These words under quotation marks were uttered by a lay delegate of reputed intelligence at a convention of the diocese, and, absurd as they obviously are, their import accords in a measure with the

Our space will not allow us to describe in detail all the mission chapels of the parish, and as all have similar methods of work, one will serve as an example of the rest. On the dark and cheerless winter nights, high above the surrounding roofs, a luminous cross may be seen from Second avenue, the Bowery, and many of the lower parts of the city; neither the wind nor the

rain affects its beams, and on a stormy night when a muffled-up, half-frozen street-car driver is driving down town against the snow that is driving up town, he, shaking the flakes from his beard, will sometimes say to any one

who is on the front platform with him: "It looks nice to-night," meaning that shining projection against the dark and leaden sky. The symbol of the Nazarene is thus set out by St. Augustine's in Houston street, and its invitation is supplemented in the storm and above the noise of the traffic by a bell which was given to Trinity Parish one hundred and seventy-nine years ago by the Lord Bishop of London. The district is exclusively poor and partly criminal. The ears most familiar



POOR-BOX IN ST. AUGUSTINE'S.

with the bell are those of the laborer and his family confined in the high tenement houses; it mingles with the whirring of many sewing-machines operated by pale girls in dismal garrets, and its tolling pleads for peace amid the brutal strife of drunkards below.

The chapel is between Second avenue and the Bowery. It was opened in November, 1877, and it has so many novel features that it is worth an extended description. The ground upon which it stands is 86 feet wide in front, from 138 to 152 in the rear, and 280 feet in depth. It is surrounded by a brick wall 10 feet high, and the inclosure is covered with grass, intersected by a wide gravel walk. After a few more summer suns have shone, the brick wall will be mantled by wistaria and Virginia creepers, and masses of flowers will appear to variegate the grass, and, although the neighborhood is so unlovely, the scholars of the day-school will have a very pretty play-ground, which in warm weather will also be used for recitations. The chapel is connected with a mission-house, and, as it was necessary to place the former in the rear and the latter in front, the façade indicates the chapel by the inference to be drawn from its ecclesias-

tical Gothic style, with the tower and spire 207 feet high. To indicate further the chapel in the rear, prominence is given to the gabled entrance in the center by a broad arch-way with ornamental iron gates opening into a spacious passage-way with tessellated pavement and timbered ceiling. The warm tints of this approach characterize all parts of the interior. Paint has been made to proselytize. The reluctant convert who is afraid that religion will not agree with him, who thinks it is an idea correlative with gloom, mildew and frostiness, finds his preconceptions unsettled by a cheeriness of color and a hospitable warmth in every corner of St. Augustine's.

The floor of the passage-way from the street is a superb example of encaustic tiling. The walls are built up with patterns of colored brick of a neutral tint, with bands of terra cotta tiles underneath the brackets which carry the ash beams of the paneled ceiling. A low round arch at the end, with doors containing large plates of clear glass, forms the entrance proper to the chapel, and as a person mounts the front steps of the vestibule leading from the



LETTER ELEVATOR AT ST. AUGUSTINE'S.

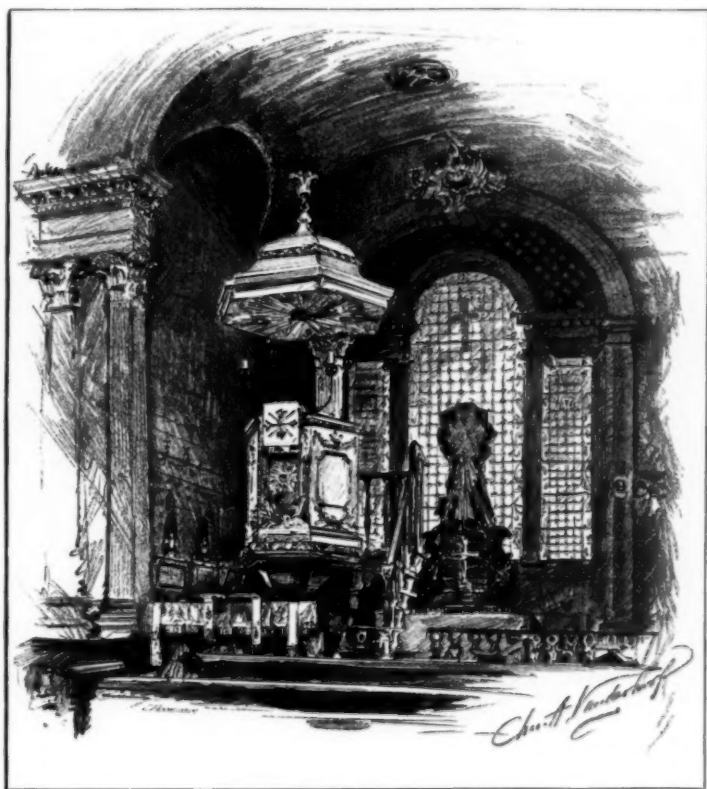


GOING TO CHURCH IN THE OLDEN TIME.

street, he sees through the doors the chancel, with its stained windows and splendid ornamentations, over two hundred feet away. The effect on any one who has been reading up the decorative arts is "charming," and, to one of a grosser sort, like the street-car drivers, to whom Cadmus and Eastlake are equally meaningless names, it is simply "nice," especially if he contrasts it with the shabbiness of the other interiors familiar to him. Then there is a vestibule with glittering brass gas-fixtures, from which we enter the chapel; and the chapel is luxurious. No doubt some of the poor people who visit it for the first time have not been in church before since childhood, and the church they remember was a cold edifice, with bare plaster walls and painful high-backed pews. What a change in this later experience! All the massive roof timbers are visible, and are of a mahogany color, picked out with black. Above the wainscot a wide space of dark red, somewhat low in tone, is carried up about eight feet, having no patterns upon it, and thence a greenish stone color reaches to the ceiling, wide bands of elaborate design separating the two body colors and bringing them both into stronger relief. The color of the choir and sanctuary is a yellowish buff, with stencil patterns in gold and yellow. The decorations are enriched with many touches of gold, the glass glows with lighter color, and the whole management of the effect has been in a higher key here than that of other

parts. The wainscoting, pews and chancel furniture are of polished butternut. The carpets, hassocks and cushions are red. The gas-fixtures are of polished brass, lighted by electricity. At vespers, the chapel is filled, and heaven must indeed seem nearer to the many unfortunates in the congregation than it does at any other time.

The chapel is used for all collective exercises of the Sunday-school, and underneath it, the floor being eight feet above the ground, are the class-rooms of the intermediate department, ten in number, each having steam radiators and ventilating flues, controlled by the teacher in charge. An engine-room and cellar are underneath the class-rooms, and we now come to the mission-house, which, as we have explained, fronts on Houston street. On the first floor is a large parish-room, play-rooms attached to the day-school, a private office of the clergy, a public waiting-room, a janitor's office and a lavatory for children. We give a full inventory, as it shows how complete the building is. The lavatory for children, instead of having a number of small basins, has two large ones, with streams of clean water constantly pouring into them; and the children wash in the streams, the basins being simply used to carry off the waste. St. Augustine's Hall monopolizes all the second floor, a space of 79 feet by 56, with a beamed ceiling of ash, 20 feet high, and is used for entertainments, for the infant depart-



INTERIOR ST. PAUL'S CHAPEL.

ment of the Sunday-school and for the industrial school, in which little girls are taught how to sew. On the next floor are the guild-rooms, the objects of which will be referred to anon, and one of them has a large open fire-place inclosed by a pretty polished butternut mantel set with tiles. Here also are the class-rooms of the grammar department of the day-school. On the fourth floor there are store-rooms for the primary department, with accommodations for 350 scholars and a dwelling for the clergyman in charge. Very pleasant quarters indeed are these for a celibate, with windows looking far over the city, a bath-room, a cozy little library and two bedrooms.

It is evident that the character of the clergyman in charge is more important than the building. A sentimentalist, an emotionalist, or an ascetic would be inappropriate to the field of an east-side mission. Com-

miseration or sympathy with the classes to be dealt with is not enough to insure success with them; but, on the contrary, they need a man with wide-open eyes and no fastidious reluctance to see them as they are,—a man of energy, insight, and worldly experience, who, affiliating with them and observing all their baseness, has in his nature a vigorous quality of Christianity that sustains him, no matter how unfavorable the outlook is, and preserves his faith despite the seeming impossibility of their regeneration. A sentimentalist would be imposed upon, an emotionalist laughed at, an ascetic defied. The requisite qualities are as rare in combination as they are indispensable, but we believe they exist in Mr. Kimber, who has charge. He is explicit, urgent, earnest, and persevering, and under his ministrations the chapel and mission have developed, within five or six years, to their

present size from a congregation which found ample room over a Bowery store.

The fifth floor contains the janitor's dwelling, comfortably furnished, and this brings us under the roof. The entire building is fitted with electric bells and speaking-tubes; it is wainscoted with ash oiled and varnished, which is also the material of the doors and window-frames, and is guarded against fire by a tank in the tower, holding 4,000 gallons of water, from which pipes lead to every floor.

Having completed our description of the

itself to making clothes for the poor; the guild of St. Agnes,—an organization of girls with the same objects as the former; and the guild of St. Nicholas,—an organization for the recreation and improvement of boys.

One evening last December, we attended the guild of St. Agnes, and no home in the land could have shown around its hearthstone a happier picture than these girls composed. Nearly all of them were evidently hard workers, engaged during the day in making clothing, paper boxes, and artificial flowers, or in other light and unre-

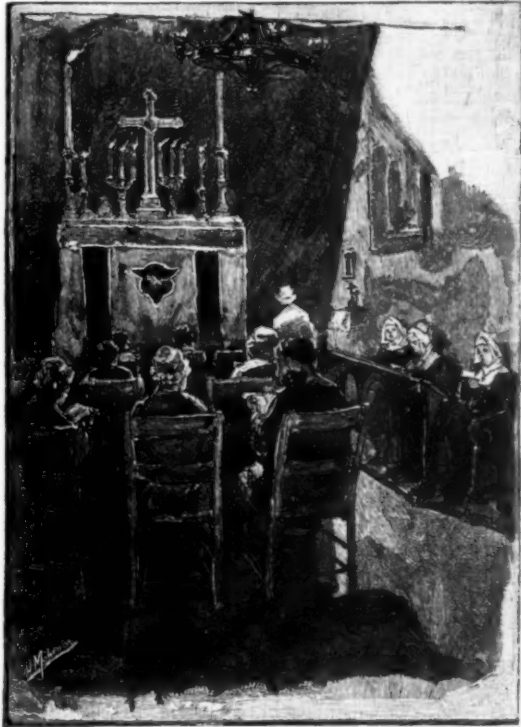


ST. PAUL'S CHAPEL, BROADWAY AND VESKY STREET.

building, let us now revert to some of the methods of work. The mission includes a Sunday-school, a free parish school, a free industrial school, the guild of St. Catharine,—an organization of women which devotes

munerative trades. There were many pretty faces among them, and all were neatly dressed. Judging from the laughter and the blithesome chatter among them, one would not have supposed that they had many

difficulties to contend with, or that their minds felt any weight of care; but a question would have proved that with each a dull routine was repeating itself from day to day; that toil began before the wintry morning was light and ended ten hours later, when the night had come; that their small earnings only procured an attic for lodging and two frugal meals a day; that it was necessary for them to make great haste home and "tidy up" in order to be in time for the session of the guild. No wonder that, despite their weariness, they hasten to the guild, for at its meetings some of them have the only taste of beauty by personal contact that their narrow experiences afford. We open the door and peep in. The room is one of the handsomest and warmest in the building. The carpets are a brilliant red, an abundance of light is emitted from the burnished gas-fixtures, and the tints on the wall, the decorative traceries, the wide butternut mantel-piece with its pictured tiles, the stained wood, the large window with the quintuple disks of colored glass, look very attractive. No restraint is placed upon the wonderful flow of gossip that accompanies the work, and the directress passes from one to another of the girls with a pleasant word for each. Bless the directress's heart! she is as youthful, as chatty, and as merry as any youngster in the room. The classes are seated at long tables, and the light shines down upon their heads. The tables are littered with every variety of fabric,—crimsons, blues, yellows, pinks, browns, grays, greens, cottons, velvets, silks, and ribbons,—and these are being cleverly fashioned into costumes for the Lilliputian nation of dolls, whose sky-blue eyes are placidly staring us out of countenance. What a famous Christmas-tree it will be that holds all these little ladies, and what gladness is being prepared by these tired work-girls for the kindred children of poverty! The session is not only a pretty picture, but it is an affecting one as well. At other seasons than Christmas the labors of the guild are devoted to the making of clothes for the poor of the parish, and a



CHAPEL TRINITY INFIRMARY.

great deal of practical good is done in this way. All the members are communicants of the church, and at the beginning of the year thirty-six coupons are issued to each, one coupon being collected at each session of the guild. Occasional tickets are issued to others than members, of whom there are forty-three, but before a girl is enrolled she has attended the Sunday-school for some time and her character is familiar to the minister.

The guild of St. Catharine's has thirteen members, and that of St. Nicholas twelve. Six years ago the chapel had only fourteen communicants; it now has one hundred and seventy-five, with a congregation of eight hundred, and the Sunday-school, which six years ago had only one hundred and fifty scholars, has now one thousand one hundred and seventeen, with fifty-one teachers, the attendance varying from nine hundred and thirty to nine hundred and sixty. The day-school for boys has ninety-seven scholars, the industrial school for little girls, five hundred and fifty-four scholars, and about four hundred persons are baptized in a year.

Though we take leave of St. Augustine's without having seen all its work, we have not reserved space in which we can do more than refer to the many other beneficent branches of Trinity Parish. The parent church itself has attached to it a parochial school in which three hundred boys are taught "all that may become a man," without any expense whatever; it also has a free choral school, a sisterhood devoted to the poor; an industrial school like that of St. Augustine's, and it annually expends a thousand dollars on clothing for its poverty-stricken parishioners.

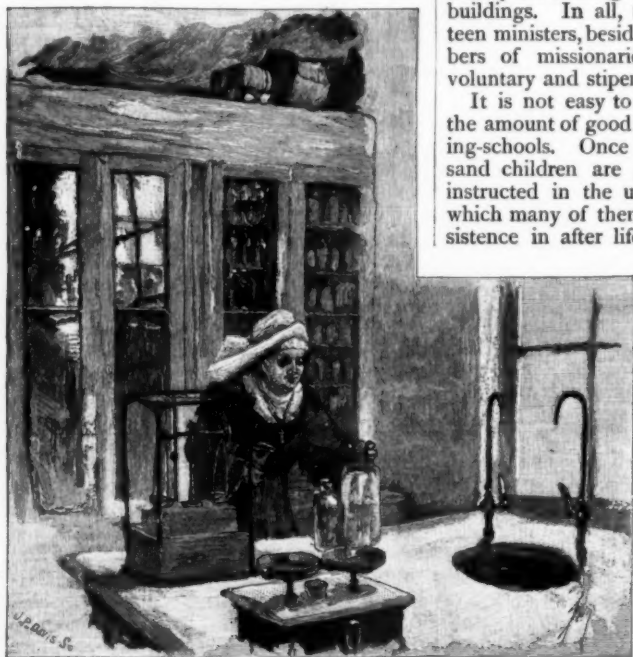
The history of the day-school is interesting. The school was established in 1704 on the ground floor of the steeple, and the masters gave instruction at their own residences when the tower could not conveniently be used. The scholars were required to attend divine service every day, and a monthly examination was held by the rector and church-wardens. Since then some changes have been made; the school-house is a large building in New Church street, and the school is in a high state of efficiency. The course of instruction includes English, Latin, German and French, and the grad-

uates are passed into various universities, the seminaries of the church, the School of Mines, the United States Naval Academy and the Military Academy at West Point.

St. Paul's Chapel, at Vesey street and Broadway, also has a large parochial school; a society which rehabilitates children who could not otherwise attend school; a sustentation fund for relieving the hungry; a sewing-class for girls and young women; a working-men's club, and a home for aged women. In addition to guilds, etc., resembling these, St. John's has a unique charity in the Leake dole of bread, the result of a bequest made some thirty years ago, by which sixty-seven loaves are distributed among the poor every Saturday morning; and among the beneficiaries are elderly maiden ladies in reduced circumstances, street-corner hucksters, laborers, laborers' wives and work-girls. Trinity Chapel has an employment society which provides poor women with work, a missionary relief society, a mother's aid society, a parish school, a home for the aged, an industrial school and various guilds. St. Chrysostom's has a Sunday-school, an industrial school, a parish school for girls, several guilds and a society for making improvements in chapel buildings. In all, the parish employs sixteen ministers, besides, of course, large numbers of missionaries and teachers, both voluntary and stipendiary.

It is not easy to place an estimate upon the amount of good that is done by the sewing-schools. Once a week over four thousand children are gathered together and instructed in the use of the needle, upon which many of them must depend for subsistence in after life. The classes include

children not more than four or five years old, who can scarcely make the simplest stitch, and others as old as fifteen, who are becoming expert seamstresses, capable of embroidering and familiar with the use of various machines. All the materials are provided by the church, and all the garments are given to those who make them. As we enter the hall of St. Au-

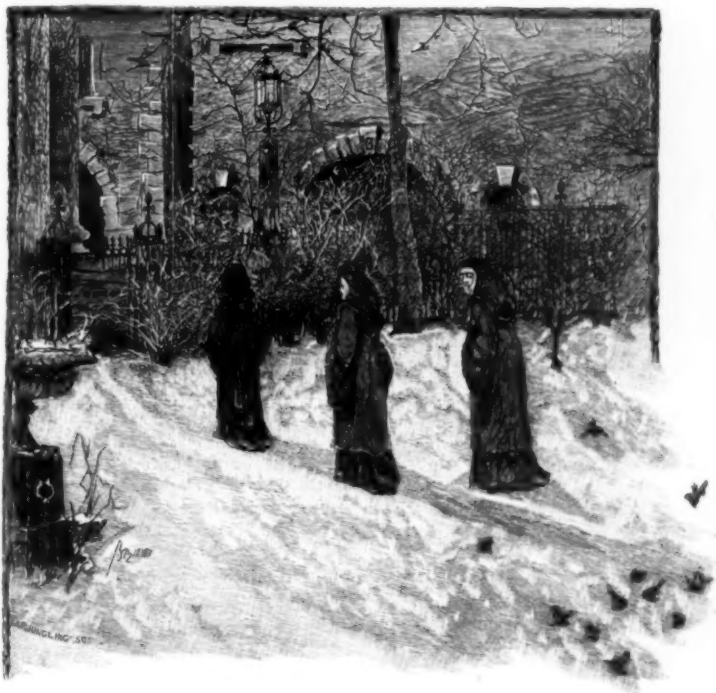


APOTHECARY'S SHOP, TRINITY INFIRMARY.

gustine on a Saturday afternoon, a bee-like hum prepares us for a scene of pleasant infantile activity. The seats are formed into hollow squares, and the classes are at work in these inclosures, superintended by

when the chapel looks more attractive, in the evening when it is lighted up, or in the afternoon when it is full of a golden haze that seems tangible.

The infirmary is in Varick street, and, as



SISTERS OF ST. MARY ENTERING ST. JOHN'S CHURCH.

a gentle, patient teacher. There are about 800 children present, and the session lasts from two o'clock until four. It is a matter of pleasure rather than labor, and while among all the faces there are some which tell of delicacy improperly nurtured and of strength ebbing away before want, the inherent sadness has vanished in the excitement of the exercises. Perhaps in the years to come the needle will be loathed by some of the children who now ply it with a perceptible sense of pride; but hemming, plaiting, basting and stitching are for the present very satisfactory amusements. Most of the scholars are poorly dressed, but all have clean faces and hands and tidy hair. During Advent, when the sewing-school is closed, they march into the chapel for brief services; it would be hard to say

we have said, is maintained at an annual cost of nearly seven thousand dollars. The house has twenty-five beds, and is large and comfortable. It is in charge of the Sisters of St. Mary, which fact is sufficient to indicate that its charity is warmed by the soft influences of home. Wherever these good sisters are, the walls are not blank, and "institutionalism" is exorcised. What we mean by "institutionalism" is the peculiar and ascetic spirit which would make a Spartan of a frail invalid, and which by its methods incessantly reminds him that he is eleemosynary, and that hospitals and homes are very different things,—in fact, that a shabby home is much more comfortable than a splendid hospital. These votaries of St. Mary have the art—elusive to definition—of making an empty window, without blinds

or curtains, look pretty by a shoot of ivy or a graceful, bending fern in a pot, whose original ugliness is ingeniously concealed by a device in colored paper; and, while the wards are furnished in the simplest style, the same taste, or happiness of resource, has been applied with effective results to the



MEMORIAL CHAPEL, TRINITY CHURCH.

transformation of every unsightly little corner. The sisters have a little oratory on the first floor, and next to this is a prepossessing reception-room, with a dining-room in the rear. The convalescent patients and the sisters dine together, and the table was set, at the time of our visit, with linen, glass and cutlery neat to a degree that would have been creditable to an "up-town" club. There is plenty of sunshine and fresh air in all parts of the house, and the windows look out upon the garden which connects the infirmary with St. John's Chapel. In the summer, this garden, a green oasis in the midst of towering brick buildings, is a resort for the patients who are able to move about; and they sit here reading, or chatting, or musing, as they listen to the reverberations of the traffic in the adjoining streets. On the second floor we come to the apothecary's

shop, and the apothecary is one of the sisters, whose ability in dispensing the prescriptions suggests a new and suitable employment for women. A hymn is being played on a melodeon to an accompaniment of voices, and the sister who is with us tells us that they are all "fond of music." In the ward from which the strains proceed we find a lady visitor seated at the instrument, and the patients in bed are recalling in treble the words of the tune. The men's ward is on the third floor; nearly every bed is occupied, and another sister is ministering to the wants of the patients. An emaciated boy, suffering from some wasting disease, is seated in a chair on wheels, while a visitor is reading to him from the New Testament, and occasionally catechising him. A young man, whose face shows no signs of disease, is groaning from the terrible pains of sciatica; and an old man is holding the morning paper in one hand, while the other rests in a sling, aching from a severe fracture. The sisters have their house full and hands full. About one hundred and fifty patients come to them in a year, Americans, English, Irish, Germans, Scotch, Swedes, Italians, Spaniards, Dutch and others. Preference is given to Episcopalians, but when there are empty beds, no one is excluded on account of sect.

The extent and variety of the charities connected with Trinity are so great, that if we had omitted our synopsis of the church's history, it would still have been impossible to describe them all even in such detached sketches as we have given of the sewing-schools and the infirmary. Pages might be filled with descriptions of the work in the guilds, the schools, the working-men's societies and the sisterhoods. We have not yet said a word about the Winter Fund, which is a reserve to meet special emergencies of the season, such as coal and rent. It seems an unusual thing, but the parish, in deserving cases, actually pays the house-rent of a few of its people who are out of employment; and one cannot be more than a mile away from some substantial object of its generosity in any part of the city, between the Battery and Twenty-seventh street. Hence, the impossibility of giving the reader an exhaustive account of its scope; but before concluding we may briefly mention the Trinity Chapel Home for Aged Women at 207 West 27th street.

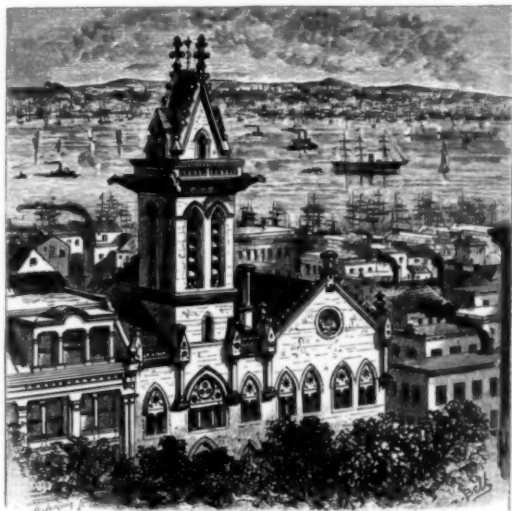
The house is small and unpretending, only distinguished from the others in the same locality by the door-plate. It is a home, and not an "institution," and its twelve inmates have

little to remind them that they are not in their own domiciles, if, indeed, they could expect as much comfort in independent circumstances as they have in the fostering care of Trinity. Few restraints are imposed upon them. They come and go within certain hours at their will, visiting their sons, daughters, and grandchildren—of whom there are probably a great many,—as often as they please, and whatever they are able to earn by knitting or sewing is retained by them for pocket money. Most of them are the widows of working-men, a few are spinsters, and all are well down the shady side of the hill,—not that they are ailing or miserable in the gloom of life's closing.

The doctor's carriage has not driven up to the door of 207 West 27th street in a year, and this exemption from sickness is recurred to with amusing complacency by all the inmates in their conversations with visitors.

"It amuses me to hear the young ones talking of pains here and pains there,—old almost before they are young," said a dame of seventy-three to us. "I never

dence of her bright eyes and sprightly manners in confirmation of the deterioration of the sex. This old lady was in the kitchen helping to prepare the dinner, which is based on a very liberal dietary; and the others make themselves so useful about the house that only one servant, in addition to the matron, is required. A pantry and closets separate the kitchen from the dining-room, in which the household gathers three times a day, and the floor above is devoted to the uses of the oratory, which is prettily decorated with evergreens for Christmas. Morning and evening prayers are read by the matron, and on Wednesday afternoons, one of the assistant ministers gives a lecture. The chambers are provided with two or three beds, according to their size, and the occupants have ornamented them according to their means or tastes. The furniture is plain and homelike, and the rooms have nothing to indicate that they are not part of a private residence. Some of the occupants were sewing, others knitting or reading, and there was no idleness or listlessness among them. As we were introduced we were met with courtesies and pleasant smiles. No discontent,

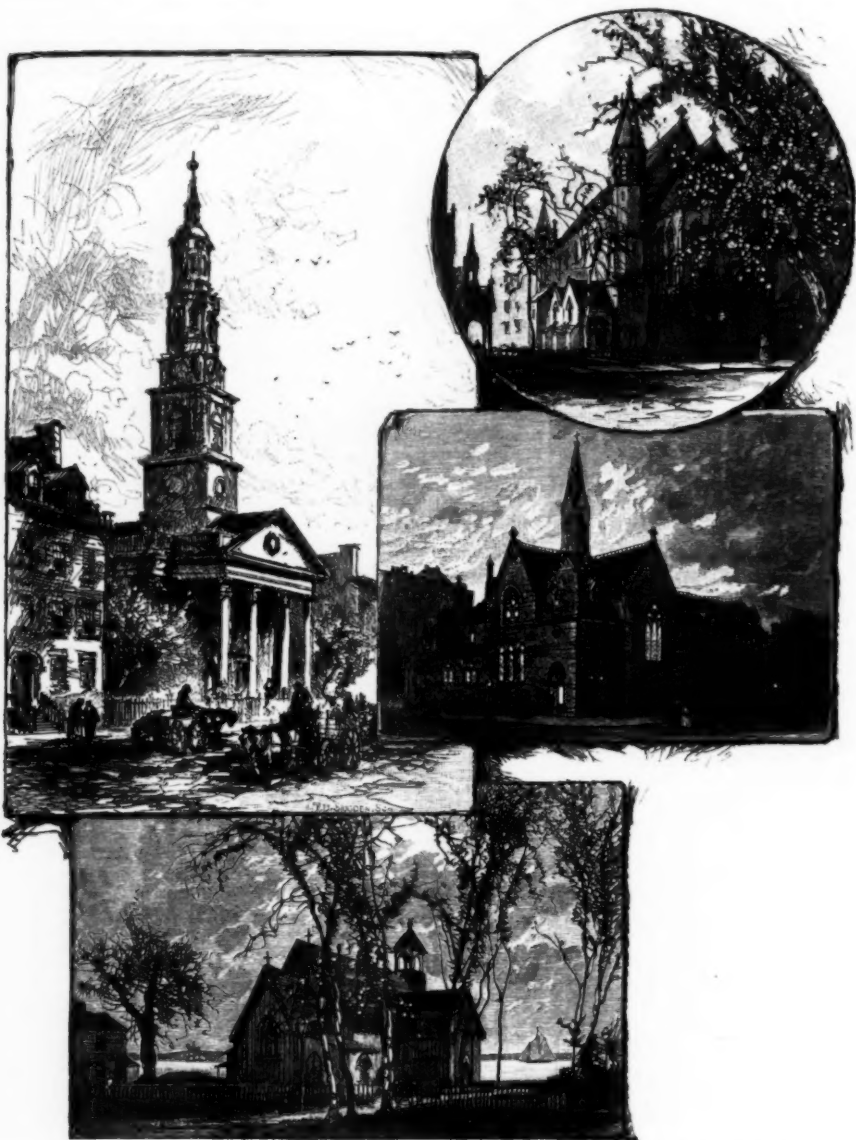


TRINITY SCHOOL, NEW CHURCH STREET.

had a pain since I can remember—no rheumatism, no lumbago, no head-aches. Women are not what they were in my time, sir;" and we perforce take the evi-

no discomfort, was visible, and the December sunshine poured in on the old ladies at their work.

Thus in many ways not formally religious,



ST. JOHN'S CHAPEL.

ST. CORNELIUS'S CHAPEL, GOVERNOR'S ISLAND.

TRINITY CHAPEL.
ST. CHRYSOSTOM'S CHAPEL.

in the common sense of that word, Trinity becomes a living church, with a far-reaching influence in the elevation and maintenance of the poor, not existing in tradition nor in a sphere of ecclesiastical pomp, but

glorifying God through the hearts of men and embodying the principles of the New Testament in a varied usefulness which is felt, though it is not fully appreciated, in all parts of the city.

THE DELUSIONS OF CLAIRVOYANCE.

PROBABLY nine out of ten of the intelligent people of this country believe more or less firmly that certain persons, in peculiar states of the body or mind, have the power of clairvoyance or clear seeing, or, as it is sometimes called, of second sight. Just what this power is, or rather what is claimed for it, cannot be stated in a word, for the reason that it is vague and uncertain, varying with the person making the claim; but in general it is regarded as a kind of sixth sense not given to all individuals nor to any individual at all times, but developed usually, if not always, in the state of trance. Those who are favored above their fellow-mortals by this special gift of heaven can tell the past and predict the future histories of those with whom they are *en rapport*, and, more specifically, can find lost persons and property, diagnose and cure obscure diseases without seeing the patient, and, in some instances, become the privileged bearers of messages from the world of spirits.

Clairvoyance is the daughter of animal magnetism, which is the one great delusion of our time and especially of our country, and is indeed to the nineteenth century what witchcraft was to the sixteenth or seventeenth. The chief fact of interest connected with this delusion of clairvoyance as well as with its parent, animal magnetism, is that at the present time it prevails more widely among the thoughtful and cultured class than among the ignorant and degraded; among the latter the active belief in this delusion is unconsciously dying out; those who consult clairvoyants ride in carriages, dress in silks, laces and diamonds, attend popular churches, and, what is most remarkable, are highly intelligent in literature, in art and even in science.

In this respect, clairvoyance is repeating the history of witchcraft, which, as Mr. Lecky forcibly points out, was abandoned by the ignorant and the lowly, while yet scholars and gentlemen, jurists and philosophers, and even theologians such as Erasmus and Luther, Matthew Hale and Cotton Mather loved it, cherished it and fought for it.

The position that physicians and men of science have held in regard to these unscientific claims is one of passive but not active rejection; they have been unwilling to declare with certainty that such phenomena may not occur, although not regarding them

as in any sense proved, in spite of the testimony in their favor; consequently these claims have not been formally received into science, nor have they been formally expelled from science; rather they have been kept on the anxious seat, in a kind of probation, while all the time the suspicion has been growing and extending that the higher science of the future would cast them out altogether, just as the science of the past and present has already cast out the claims of witchcraft, alchemy, astrology, elixir of life, squaring the circle and perpetual motion. It is but a very few years since a paper was read at a meeting of the New York State Medical Society by one of the prominent members, advocating, in calm and earnest language, all the claims that it is the object of this essay to refute; and yet not a word of protest was offered. The silence that followed the reading of the paper was quite far from consent; but, at the present day, the reading of such a production would be met by facts and arguments of a most convincing character, for the advance of knowledge in the medical profession is away from these and all allied claims.* Medical science has been reconstructed since the committees of the French Academy made their non-expert experiments on the subject of clairvoyance and mesmerism.

Outside of negroes and spiritualists, there are probably not a thousand persons in this country who have even a lingering faith in witchcraft; on the other hand, there are probably not a thousand intelligent persons in the country—not even excepting physicians and all classes of professional, scientific and literary men—who would be willing to state, with absolute positiveness, that clairvoyance and animal magnetism were utter delusions; that there was nothing in them whatever that could not be explained in full detail by known physiological laws and by trickery; and yet, a person who should make such a positive statement would be quite right and would be sustained by the future. No member of the human race, man or woman, child or adult, in trance or out of trance, or in any

* It is evidence of the rapid progress of professional knowledge of these subjects, that at the last meeting of the society the president, Dr. Roosa, in his annual address, took the sound, scientific position in regard to delusions, and it was voted that his address be sent to every physician in the state.

phase of health or disease, ever possessed, even for one moment, the feeblest degree of clairvoyant or second-sight power.

It is known by established and formulated biological law that no human being has, or can have, any quality different in *kind* from those that belong to the race in general. To this law there can be no exception. What the law of gravity is to the claim of the vortices; what the Copernican theory is to the claims of those who believe in the flatness of the earth; what chemistry is to alchemy; what astronomy is to astrology; what mathematics is to the claim of squaring the circle; what the law of conservation of force is to the claim of perpetual motion; what general physiology and pathology are to the claims of witchcraft and spiritism; what the physiology and pathology of the involuntary life are to spiritism,—such is the above biological law to the claims of clairvoyance, prophesy, and mind-reading; disproving them absolutely and beyond the need of investigation,—indeed, to such a degree as to make investigation unscientific, as well as unnecessary. In this way, science, or organized knowledge, by discovering and formulating the unalterable laws of nature, in the various departments of human endeavor, is able to predict with unfailing precision not only what will happen, but what cannot happen. Science thus becomes the real and only clairvoyant; only through the eyes of science is it given to man to read the future.

The amount of human testimony in favor of the claim of clairvoyance is, it must be allowed, enormous and imposing, almost equal to that in favor of the claims of witchcraft, astrology, and the elixir of life; but in science average human testimony is of no value. A good example of the worth—or, rather, of the worthlessness—of popular beliefs in scientific matters, is the superstition, almost universal in this country, even among the very best classes, that it is the custom of surgeons to take out the eye and replace it in the socket. Oculists tell me that their patients sometimes declare that they have seen this operation performed, and they will not be convinced to the contrary by the statement of experts that it is as easy to cut off the head and replace it, as to detach the eye from its vascular and nervous connection and put it back in its socket. A medical friend tells me that he was once earnestly urged to take out a patient's liver and scrape it; and, when he demurred against attempting such an impossible operation, he was

informed that it could be done, that she had seen it done, or, at least, knew of its being done in the case of one of her friends; and, as usual in such cases, she persisted in her belief. Superstition is always skeptical. Those who consult clairvoyants are in logic not believers, unbelievers, since they doubt the teachings of science, distrust the necessary conclusions of the trained intellect, reject or ignore inevitable truth, refuse obedience to the empire of law, and take up arms against Nature itself.

To the eye of the physiologist, who is familiar with the science of delusions, all the claims built upon alleged clairvoyance are not even mysterious; they are as transparent as glass, and as frail. Science sees right through them, and it has but to touch them and they shiver to atoms.

The practical success of clairvoyants, public and private, is the result of these three factors: 1. guess-work reduced to a science and an art, 2. coincidences, and 3. trickery.

Guessing is at once a science and an art,—a science, because it may be regulated by certain principles. The familiar "guessing game" illustrates what can be done by guessing scientifically carried out; with the privilege to the guesser of but twenty chances, he may yet, beginning with the kingdom to which the article belongs, reach the most minute object before his list is exhausted. Success in this game, as all who have played it know, depends much on practice. Clairvoyants devote their lives to the practice of this game, for they play it with every victim they meet.

The subject of coincidences is one that has excited far less attention among the students of history or of human nature than it deserves; little, indeed, has been written upon it. Among those who have given the subject any thought, the most erroneous impression prevails that it can be brought under the laws of pure mathematics. In the life of every active human being are frequent, almost daily occurring, coincidences, which those who give any attention to them may, if they choose, make the basis of most absurd delusions. Usually we give no more attention to these occurrences than an exclamation of surprise, and then forget all about them. We are talking of a person whom, perhaps, we rarely meet, and have not seen for a long time; suddenly he appears. A thought—out of the ordinary course, it may be—enters our mind; we express it, when behold! the same thought has just been passing through the mind of our friend. We meet with a certain experience, and then

we remember, or fancy we remember, that the same experience has happened to us in a dream. Of all these daily and hourly happening coincidences, clairvoyants skillfully avail themselves, and in that direction they are aided by the ignorance and eagerness of their victims.

The trickery of clairvoyants consists mainly in the art of making their victims unconsciously reveal, by word or look, facts of personal history, and then, at the proper time, in re-imparting the information to them. In this way they gain the credit, even among persons of keen intellect, of being endowed with divine powers.

In drawing out the facts of personal or family history, clairvoyants do not always ask direct questions, but rather make statements with an implied interrogation, to which the victim, oftentimes entirely unconsciously, responds by word or look or gesture, or perhaps by all three; and, at a later stage of the interview, these secret facts are artfully given back to the victim, who has no recollection of having previously imparted them, and will not believe that he has done so, but prefers to believe that he is in the presence of Divinity.

It is not only possible but easy for a practical adept to draw out in this way minute and elaborate details of secret family history. A few years ago, while connected with one of the public institutions of this city, I made a number of experiments in this line. I told the patients afflicted with various forms of nervous and allied disorders, not to tell me about their symptoms, nor give me any facts in their cases, but to let me tell them; and then I would proceed to indicate, after the manner of a clairvoyant, the locality of their maladies, and the history of their troubles. In the majority of cases I was successful, and made out the diagnosis to the satisfaction of those who sought my advice, and with good reason, for nothing that I could do prevented them from telling me, although I asked them no questions; unintentionally and unconsciously, they would guide me at every stage of the interview. By a little practice any one could easily acquire this art; and long study, such as professional clairvoyants bestow upon this subject, develops great skill in thus managing and deluding the unwary and non-expert.

Another trick of clairvoyants is to find out facts in the lives of their victims before they consult them. In some cases this can be done without difficulty. One instance was

brought to my notice, where a traveling diviner astonished an entire village by informing those who consulted him of certain mysterious occurrences that had taken place there long before, and of which in some way he had gained knowledge. Grave-yards, town records, photograph albums, family bibles, and all other sources of family history, are elaborately studied by clairvoyants and mediums.

Yet another way of learning secrets is to employ a confederate who converses with the victims in the waiting-room and learns from them the object of their visit, or listens to their conversation from a safely secured closet. This form of trickery, however, is not usual, the first named being usually sufficient to deceive almost any non-expert. This is similar to the well-known confidence game. The old trick of opening sealed letters is very easy as dry heat or dry cold carefully applied will open almost any sealed letter without breaking the seal.

The undoubted success of clairvoyants in relieving and curing cases of obscure diseases is very easily explained. It has been shown in all ages, and among all people, that the action of the mind upon the body is one of the most potent means of relieving physical maladies, and, more or less, all successful physicians avail themselves, consciously or unconsciously, of this means of treatment. The confidence in clairvoyants, on the part of those who consult them, is the chief cause of their cures. In some cases tonic remedies are given that meet nearly all cases, and perhaps really help a certain proportion.

In order to test clairvoyance it is necessary to use test cases, into which the element of error from chance or coincidence cannot enter. In nearly all the cases of acute or chronic disease, at some one or all the stages there is pain in all the principal regions of the body, in the head, the chest, the stomach, the abdomen, and in the limbs. Take the cases of disease as they run, and we find very few indeed whose subjects have any prominent region of the body into which pains or uneasy sensations have not entered. Notably is this the case in chronic nervous diseases, the class that are most frequently referred to clairvoyants. It is in the majority of cases impossible for a clairvoyant to miss making a satisfactory diagnosis; so far, at least, as determining the locality of the pain is concerned, the difficulty of guessing wrong is greater than the difficulty of guessing right.

When a patient of this kind visits a clairvoyant, or sends a friend to consult her, or incloses a lock of hair in a letter and intrusts it to the mail, the chances are ten to one that he will get an answer which, in a general way, corresponds to his own idea and experience of the disease.

Another way in which clairvoyants succeed is by cautious generalizations that are wide enough to include specific facts. This statement can be best made clear by illustration. In guessing the value of lost property, for example, clairvoyants frequently say that it is jewelry. This revelation at once astonishes and delights the seeker for information, and he never stops to think that in nine cases out of ten stolen articles are some kind of jewelry. People very rarely consult a clairvoyant for lost books or papers, or trifles of any kind, or indeed for any other but quite valuable articles, as gold, silver, diamonds, or precious stones. The clairvoyant, encouraged by the perhaps unconscious expressions of satisfaction on the part of her interlocutor, hazards a guess, and states with great pomp and dignity that it is *round*. This announcement causes yet greater delight, for who, under such circumstances, overawed by converse with a superior being in direct communication with heaven, would stop to consider that almost all jewelry is "round," watches, rings, studs, locketts, buttons, pencils, pen-holders, plate of table-ware, even of all kinds, as napkin rings, ear-rings, braceletts, and so on, through the entire catalogue of a jeweler's establishment. Then she ventures the statement that it is of a bright color, which is pretty generally true of any jewelry worth keeping. To all these statements the seeker for information unconsciously nods assent; so the clairvoyant is sure she is right so far as she has gone. Growing a little more bold, the declaration is made that the article is small, "as she sees it," as though articles of jewelry were ever large. Again the victim nods assent. "It is worn about the person sometimes," continues the mind-reader. The speaking eye of the victim tells her that thus far there has been no mistake. "It is not a bracelet?" The expression, which she is intently watching by opening her eyes at each critical moment, tells her no. "Nor a ring? It is larger than that." No sign of assent from the entranced dupe, but rather a look of negation, which the operator quickly interprets. "It's a watch?" is the next venture.

"That's so; but how could you find out?" inquires the astounded visitor.

"It's just as mysterious to me as to you," replies the deceiver; "but it exhausts me terribly."

"Can you tell me what has become of the watch?" further inquires the visitor, overjoyed as well as astonished, and ready to receive anything.

"Sometimes I can do that. You suspect your servant-girl, and you are right," is the shrewd reply.

So long as that victim lives she will sound the praises of that clairvoyant, and will declare that she could read the secrets of the soul.

A friend of mine, a superior expert in the study of delusions, once visited a male clairvoyant and medium by the name of Slade,—a man very famous in this specialty,—and made inquiries about an invalid lady friend. Slade closed his eyes, professing, after the manner of those of his class, to go into a trance, and prepared to deliver his revelations. He began by inquiring the sex of the invalid, and then made the very general statement, "This person is quite nervous." As this remark would apply to nearly the entire population of this country, my friend was not specially enlightened. Then followed a string of generalizations, such as that there was "congestion," and "quiet was needed," and so forth,—statements that would apply to about every bed-ridden person in the land. My friend was so amused at the awkwardness of the imposition that he laughed aloud, at which the entranced medium instantly opened his eyes.

And yet the majority of the dupes of clairvoyants would have called such an interview satisfactory, and would have gone away declaring that they had been told just what was the matter with the patient.

One time, in company with the same friend, I visited a Mrs. Chase, a noted clairvoyant, a stately and graceful lady, famous both for her cures and as a finder of lost property. Judging from our looks, perhaps, that we were not sufficiently credulous, she was at first indisposed to grant an interview, but finally consented. Lowering the gas somewhat, she passed her hand over her face, and professed to go into a trance in a style quite artistic. I had in my mind a patient with a goiter, or tumor of the neck, who at that time

chanced to be under my care. In all other respects the patient was perfectly well. There were no general symptoms upon which a clairvoyant could seize. The disease was special and local, and was disappearing under treatment. The case was therefore excellently adapted to test the alleged powers of clear seeing.

The woman began by quiet questioning to find out the particulars of the case, but I gave her little assistance beyond informing her that the sick person was a young man, and my friend. I need not go into the full details of a *séance* that was protracted for nearly two hours, all of which time was occupied on the part of the clairvoyant in the hopeless endeavor to devise generalizations that would cover the case for which she was consulted. She informed me that my patient was confined to his bed in the basement of a house in New York, that he would not probably recover, that he had been badly treated by some one, and that he would probably continue to be a sufferer, in spite of all that I could do.

"Is there no hope?" inquired I. "Cannot you do something for him? I can't bear the thought of losing my friend."

"We may help him," she replied.

"Who is *we*?" I inquired.

"Myself," she replied. "When I am in this state I say *we*."

What she meant by this I did not fully understand, but it may be supposed that in the trance state she professed to count herself one, and her personality another, making two in all, thus justifying the editorial "*we*."

"Our tonic No. 47," she continued, "will help him."

"Do you see him as you talk to me?" I asked.

"Yes; I see the room, and his friends about his bed; he is suffering terribly; it is all before us."

"Wonderful, wonderful!" I ejaculated as I thought of my patient in perfect health, (save a slight tumor), attending to his daily duties.

I promised to get a bottle of tonic No. 47 the next day, and further asked whether it would not be well to remove the patient to one of the upper stories of the house, where the air would be better. She thought he was too weak to be moved, whereupon I suggested that the whole floor over his head might be removed and the bed raised by ropes. Even this horrible absurdity disturbed her but slightly, for she went on manu-

facturing falsehood after falsehood with a cool and calm countenance and a perfectly untroubled manner. The equanimity of this woman excited our amazement and admiration. Every word that she uttered during that long interview was a lie. She knew that she was lying and that her trance was a sham, and she suspected that we knew it; and yet there was nothing in her manner to suggest anything but entire confidence in the truth of her revelations.

In the early part of the interview I induced her to say that my patient was of good character. In the latter part of the interview, leading her along by various suggestions, saying yes to all her guesses and raising little queries now and then, I induced her to give a directly opposite opinion that he was a harum-scarum young fellow. After some further trifling suggestions we closed the interview. As I paid my fee I asked her with the sincerest possible expression:

"Do you always get your cases as accurately in all their details as this?"

"Yes, almost always."

"Then you must be inspired," I replied, and left her, with the final assurance from her that if my friend, bad as he was, would take her tonic No. 47 there was perhaps one chance in ten that he would get well. And yet this clairvoyant did as well as any one ever did or ever could with such a test case as I gave her. I have seen many of the best clairvoyants in the country, and she succeeded as well as any other.

In order to test the power of a very celebrated woman in New York who was every week doing wonderful things in medicine, and in the discovery of lost property, I used as a test case a medical instrument that had strangely disappeared. This was an instrument that was then comparatively new and would not be familiar to the majority of people, even to clairvoyants. The test seemed to me almost a crucial one and the chance of her guessing it one in many millions. This was my first experience with clairvoyants. Although I was there to investigate her professed powers, or rather to find out how it was that so many of my friends were deluded by her, I yet allowed myself to tell her where I lived, and was beginning to give her other information when my reason came to the front and took command. Up to that moment she had astonished me by the general accuracy of her guesses; after that moment all was confusion; I no

longer gave my dissent from or assent to her leading questions by any audible sound whatever, or by expression of the face, but compelled her to confine herself to her legitimate business of mind-reading. She informed me that the article I had lost was small, as is indeed almost all lost property, and that it was of a bright color, which is true of all jewelry and metals.*

I have been speaking thus far of public clairvoyants, those who make a business of pretending to go into the trance, and, while in that state, of finding lost persons and property and diagnosing and curing disease; while there are some persons who can at will put themselves into a trance, yet these public clairvoyants rarely, if ever, go into that state. There is no reason why they should do so even if they have the power, for the trance, in any of its stages, confers no new or special gifts, but only exaltation of those senses and those faculties that in greater or less degree are common to all persons out of the trance.

Trance is a disease of the nervous system in which the cerebral activity is concentrated in some limited region of the brain, the activity of the rest of the brain being for the time suspended. It is not so very infrequent, is, indeed, quite common; very many cases representing various phases have been brought to my attention; some of them I have had opportunity to study at every possible advantage. Among the genuine and interesting symptoms of trance are sighing respiration, excited pulse, exaltation of the special senses, giving rise to the belief that there is a transference of sense or a sixth sense, coldness of the extremities, darting, shooting, thrilling sensations resembling electrical shocks, muscular twitchings, convulsions, closing of the eyes and fixity of

position, illusions and hallucinations, somnambulism, and, in rare cases, double consciousness. All of these phenomena are of the highest interest, and they are verifiable, but they are not supernatural, nor unnatural; they are a part of law as truly as the symptoms of small-pox or typhoid fever.

The early stages of the trance can be readily counterfeited so that the best expert cannot detect it. Clairvoyants have every reason in the world to simulate the trance, because there is in all civilized lands an almost universal but very erroneous belief that the trance develops powers of prophecy and second sight. On the other hand they have every reason to keep out of the genuine trance, because when we seek to deceive and swindle our fellow-mortals we need full control of our faculties, and this entranced persons do not have.

Another count in this indictment against public clairvoyants is that many of them are procuresses and seek in every way the ruin of the young girls who consult them. Their power over their victims even when they do not directly accomplish their destruction is very great, leading oftentimes to waste of money, or health or life.

Clairvoyants are responsible for not a few deaths in the families of those who believe in them. Their method is as follows: A clairvoyant hazards the prediction that a death will take place in the family of one of her patrons in less than a year. During the next year, some one or two in that family are taken ill, it may be seriously; the prediction is called to mind and the consequent fright may be the cause of the patient's death.

To rescue one who has ever become fully convinced of the genuineness of clairvoyants, and addicted to the habit of consulting them, is sometimes as difficult as to save a drunkard or an opium eater. The victims of clairvoyance, as of other and allied untruths, become moral inebriates; they are drunk with their delusions, and, although, like the victims of intemperance, they may be ashamed of their folly, and, when removed from temptation, may resolve, in full sincerity to reform, yet, under the pressure of affliction, or in the presence of a pretender to these mysterious powers, their resolutions are forgotten; they relapse like the drunkard who finds that a single glass of wine is stronger than legions of pledges, or the love and pleadings of wife, and parent, and child.

The friend to whom I have several times referred, and who is an expert in the study

* Those who would learn the secret of the success of clairvoyants would do well to study in detail the performances of that wonderful lad, who recently convinced the residents of St. Albans, Vermont, that he was Charley Ross. Even a citizen of Philadelphia was for the time convinced by his general replies to questioning that the clever lad was, as he pretended, familiar with that city. The desire of the people to have the boy proved to be the real Charley Ross blinded them to the defects or blunders in his statements, and induced them to aid him unconsciously in the manufacture of his lies. Mr. Ross, himself made skeptical by many disappointments, at once recognized the real character of the pretender.

In a similar manner, those who visit clairvoyants, desire to have them succeed, and consequently overlook their mistakes, make the most of their happy hits, and unconsciously assist and guide their guessing in every possible way.

of delusions, and has had an especially large experience in detecting and exposing clairvoyants, tells me that he has found great difficulty in saving their victims, especially young persons, who have once fallen into their power.

Sometimes, as I myself know, the treatment of established physicians of character and education has been completely overthrown,—and with disastrous results,—by some one's superstitious confidence in the prescriptions of clairvoyants.

To offer money rewards for the display of clairvoyant power—as the French Academy has done—is unscientific and puerile, and—save, perhaps, as a means of impressing and convincing the people, who cannot understand physiological law—should not be encouraged. Money has its limitations as well as its power; the laws of nature are not in the market; the sun cannot be hired to rise in the west, nor to give place to the earth as the center of our system; the principle of the conservation of force is not open to bribery; and all the wealth of the world is as helpless as an infant to make seventeen out of two and two, or to endow any human creature with clairvoyant, or second-sight, or mind-reading, power.

Sometimes the question is asked whether some of the public clairvoyants may not be honest, self deceived, but not intentional swindlers. Honest clairvoyance pursued as a business is a contradiction of words. Success in the practice of clairvoyance as a trade requires a knowledge, natural or acquired, of the conditions of success, one of which is intentional deception of the victim. In private life there are occasionally found those who, through exhaustion of disease or from natural susceptibility of constitution, readily fall into the well-understood state of trance, and in that state they honestly imagine that they are blessed with the gifts of healing and prophecy, and in this delusion they are encouraged by the fondness of friends, the credulity or non-expertness of their medical attendants, and by occasional coincidences. Clairvoyants of this class are sometimes honest at first, although they may develop into professional tricksters; but if they remain honest, they soon find out that their gifts are too uncertain to be of any practical value, and soon, as the expression goes, they "lose their powers."

A striking case of this kind occurred a few years since in Brooklyn. A young lady of good character afflicted with severe

chronic disease professed to be favored with second sight. Friends and physicians, amid great excitement, urged her on; clergymen and newspapers became interested and professed to investigate; half a city went wild about a poor suffering invalid, who had no powers except those common to the race, and who, above all things, needed to be let alone.*

Another question often raised is whether these public clairvoyants can be legally punished. I received about a year ago a letter from one of the editors of this city, asking me to aid him in framing a law to be presented to the legislature that would cover these cases. My reply was in substance that any law, however skillfully framed, could be enforced only with great difficulty, especially in this country. In a despotism impostors fare much harder than in America. As long as average human testimony is accepted in our courts on questions of this nature, so long will it be impossible to convict clairvoyants or mediums; for human testimony without limit can be brought in favor of the wildest of their claims. Even witchcraft, in the days of its glory, could not have arrayed a more intelligent, and honorable, and sincere body of believers and advocates, than the clairvoyance of to-day.

In departments of science that have been long established, the testimony of two or three experts, if they accord, outweighs that of

* Since the above was written, this person, Mollie Fancher, has become famous all over the world; and, if any amount of excellent human testimony of the non-expert sort could create a science, all of the claims that have been made in regard to her must be accepted. So far as the unfortunate patient is concerned, no responsibility can be attached to what she claims, or what is claimed for her; the question as it relates to her does not in any way touch on morality, but is purely one of science; the phenomena of hysteria and trance which she manifests are symptoms that are now familiar and well understood, and are of great interest; the claims of clairvoyance, second sight, and prophecy that have been made for her by various persons—though not by the physician who has seen most of her, and for years has studied her symptoms—are of the same value as similar claims that are made by and for thousands and thousands in this and other countries. In hysteria, hystero-epilepsy and hysterical trance, delusions and deceptions are a part of the symptoms as truly as starvation, exaltation of the senses, anesthesia, or paralysis, and those sufferers who manifest these delusions or deceptions are frequently no more blameworthy for them, than for the various and obvious physical symptoms of their disease. On the part of many, great desire has been expressed to see this Brooklyn case, and study her clairvoyant manifestations; but for this eagerness there is little justification, since claims, every way identical, are made by very many in private and public life, and in every part of the country.

scores of non-experts, as is seen not unfrequently in cases of poisoning; but the successful study of delusions is something very recent; it is, so to speak, just entering the domain of science; the number of experts in the subject is very limited, and those few are known as such only in a very narrow circle; consequently, their opinions are not sought for in litigated cases; but in their place, mediums and clairvoyants and their victims are invited to give their opinions under oath on one of the most difficult and important branches of science, the physiology and pathology of the nervous system.* Years

* This was illustrated in the famous Ward case in Detroit, in which any one thoroughly familiar with the subject of delusions, would have sworn, and could have sustained his oath by cogent and convincing reasoning, that a firm belief in spiritualism is not by any means a presumptive evidence of insanity, and thus would have avoided a long and useless trial.

In the Kiddle case, now before the public, the same question has been presented. There is no presumptive evidence that this hitherto successful superintendent of our public schools is insane, or likely to be; he is simply a non-expert. Cases of real or professed trance in his own family have puzzled him as they would have puzzled any one but a specialist in that department of the nervous system. Unable to account for these phenomena by laws that were known to him, he accounts for them—in accordance

hence, when the knowledge of this subject, now confined to a limited body of specialists, shall be somewhat diffused through society, and the fact of the existence of such knowledge shall be recognized, then, and probably not before, will it be possible to enforce any law designed to protect our people from clairvoyants. In this as in other matters, law follows public opinion more than it leads it. At the present time clairvoyants are very dear to the American heart; nearly every house is for them a castle; if seriously threatened, thousands would rally to their support. The remedy for delusions is not in law, but in a higher civilization.

with the accepted logic of the day—by the theory of spirits. His conclusion is unscientific, but his logic is unanswerable.

Indeed, if a belief in spiritism, in animal magnetism, in clairvoyance, in mind-reading, in the evidence of the senses, and allied delusions is proof of insanity, then this United States of America is but one vast asylum. As it is, delusions take but the third rank among the exciting causes that fill our institutions for the insane. In the twentieth century the true philosophy of trance, and kindred phenomena of the nervous system will be taught in all our schools; and then our pupils, our teachers, and our superintendents, will be saved from the evil consequences of false reasoning.

THE FLOODING OF THE SAHARA.

"ACROSS the Sahara by steamer" promises at no distant day to be classed among the announcements of this age of mechanical and engineering triumphs. That the Sahara, the figure in the world's literature and oratory for barrenness and solitude, should lose its old character and put on a new one in contrast with the old, would be surprising indeed. The proposal on the part of English and French engineers to flood the great desert with the waters of the ocean and of the Mediterranean, and transform its waste into a watery highway for the commerce of the nations, at first impresses us as visionary and impracticable. A thorough examination of the subject, however, has led some of the most eminent scientists to quite a different conclusion.

The isolation of Africa has largely been due to the succession of cataracts with which nature has blockaded her great rivers. The Nile, the Niger, and the Livingstone, with their insuperable obstacles to navigation,

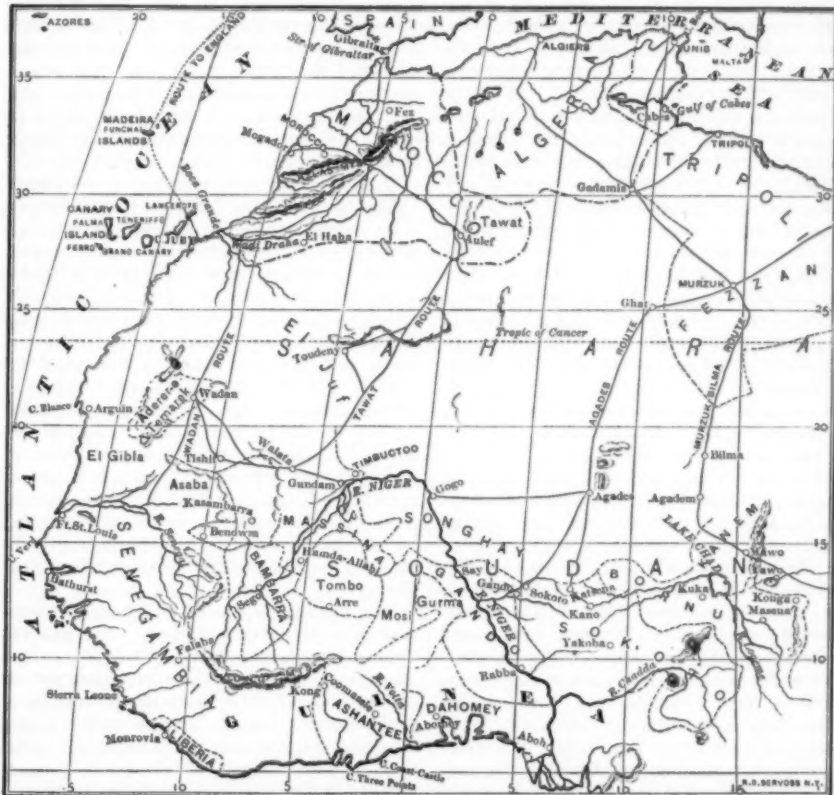
seem the very emissaries to the spirit of darkness, forbidding the entrance of light to his primeval domain. Though embracing within its boundaries nearly one-fourth of the entire land area of the globe, Africa has the smallest extent of coast line of all the continents. Few indentations are observed in its entire circuit, and consequently but few harbors exist. Its great desert, also, has always presented a barrier which the civilizations of the Mediterranean could not pass. Hence the great continent has remained undeveloped and comparatively unknown to the present. Exploration has, as yet, offered no satisfactory solution for the problem of opening Africa to the world. Stanley's magnificent achievement will be almost as magnificent for any bold adventurer who may follow in his footsteps, since the second, and probably all, descents of the Livingstone for decades to come, will be as difficult as the first. It is furthermore possible that the savages of the great river,

incensed by the vigorous reception with which Stanley met their opposition to his progress, may render it impossible for any one to follow in his footsteps during the present generation.

Probably the most original and feasible plan for laying open the heart of Africa is that recently proposed by both English and French engineers. It is no less than the remarkable suggestion which furnishes the

plan, we must examine the geography and topography of Northern and Central Africa.

The Saharan Desert embraces a vast region covering an area of about 3,000,000 square miles. Its boundaries are the spurs of the Atlas Mountains on the north, the Nile valley on the east, the Niger on the south, and the Atlantic on the west. It has been commonly believed that this entire district was a pathless waste, whose burning



MAP SHOWING THE PORTIONS OF THE SAHARA WHICH IT IS PROPOSED TO FLOOD FROM THE ATLANTIC AND THE MEDITERRANEAN.

subject of this article. Mr. Donald Mackenzie, the English engineer, proposes to flood the Sahara from the Atlantic, while Captain Roudaire and M. de Lesseps, the French engineers, are now engaged in work of a preliminary character with a view to admitting the waters of the Mediterranean to the basins of Tunis and Algeria. Mr. Mackenzie's project first merits our attention, and in order to a right understanding of his

sands were only occasionally relieved by oases of limited resources and extent. While this general impression is true of large areas of the sandy sea, whose billows, tossed by scorching winds, mercilessly bury man and beast in its tempestuous convulsions, still research has shown that by far the greater part of this vast region is diversified by snow-capped mountains, verdant valleys and occasional groves, and is watered by rivers

and torrents, which, while burying themselves in the sands, impart life to the vegetation growing above them.

The Sahara supports a large population, divided into nations and communities having walled towns and extensive plantations. Its climate in the more elevated districts is pronounced healthy and agreeable. In the Western Sahara, between the parallels 18° and 30° North Latitude, lies a large tract of impassable desert, so sterile and so forbidding that no wandering Arab or native Berber ventures to traverse its waste. Only upon its borders have stations been established for the purpose of working the layers of salt which compose its bed. A large part of this salt waste is known as El Juf, the great sink of the desert, being 200 feet below the level of the Atlantic. The greatest length of this depression is given as 500 miles, and the greatest width at 120 miles, with an area of nearly 60,000 square miles. Like depressions of less extent are situated in Tunis and Algeria. One of these, situated south-west of the gulf of Cabes, is the center of the French survey under the engineers previously mentioned. It is supposed to have been once connected with the Mediterranean. In the opinion of the engineers and scientists who have examined El Juf, there can be little doubt that it was once an arm of the Atlantic Ocean. Tradition reports the former existence of an extensive lake in the region of El Juf which was rapidly transformed into a sterile sand waste. Diodorus Siculus records that the lake of the Hesperides in Western Sahara suddenly succumbed to evaporation. In 681 A. D. the Arabs found the north of Africa well wooded, possessing extensive lakes and abundant streams of water. The inhabitants of the land, under shelter of the forests, harassed and defeated the invaders for more than a century. At last the Arabs instituted a wholesale destruction of the forests and drove the natives far into the interior. In less than five centuries it would seem that the destruction of the forests wrought the ruin of the vast region which is now blighted by the curse of the Sahara. In 1200 A. D. the lakes had become salt marshes which were rapidly disappearing. The streams, no longer supplied by filtrations of moisture from the once wooded districts, only now and then appeared in spasmodic and angry torrents, soon to be lost in the treacherous soil.

Gradually the equatorial winds, unchecked by forest growth, bore on the sands, until

the desert in its steady encroachments extended its blighting presence over the vast area which it now covers. Such is the tradition and such probably is the fact. While destruction of the forests may have contributed to the general result as described, the disappearance of the sea of El Juf was probably due to another cause.

Explorers agree that a channel once connected its north-western extremity with the Atlantic Ocean, at a point near Cape Juby opposite the Canary Islands. This channel, called by the natives, Sakiet El Hamra, presents abundant evidence of once having admitted the waters of the sea. Its bed is encrusted with marine salt, and shells. On the Atlantic coast it terminates in a sand-bank which prevents the waters of the ocean from flowing into its bed. Its great mouth, —Boca Grande,—resembling a miniature Gibraltar, is formed between perpendicular rocks which rise to a height of 200 feet above the sea; it measures between the rocks two and a half miles in width, and is blockaded by the sand-bar above mentioned, which itself has a width of 300 yards across, and a height above the sea of thirty feet at the south side of the channel, and ten feet at north. This bar was no doubt formed by a strong current which here sets continually toward the shore, and by the action of the waves which now beat furiously upon it during stormy weather. Thus it is believed that El Juf was separated from the ocean and became successively a salt marsh, and a sandy waste, whose surface is still covered with abundant remains of marine life.

The channel of Sakiet El Hamra widens rapidly as it extends inland. A chain of mountains running north and south, a few miles from the coast, does not interrupt its course but accommodates its passage by a perpendicular break, fifteen miles wide, located opposite the Boca Grande. The bed of the channel is estimated at 200 feet below the sea-level, while its banks in some places rise to a height of 500 feet. The ease with which El Juf could be flooded from the Atlantic is appreciated when we consider that all that is required is the excavation of a ship-canal 300 yards long through the sand-bar at the mouth of the channel.

Since the bed of the channel is at present 200 feet below the sea-level, the water of the sea could be utilized for the work of cutting the canal after a small ditch had once been dug across the bar. The torrent which

would pour through the opening would no doubt soon remove the greater portion of the obstruction. However, when the great inland basin had again been filled and the water level both within and without the great mouth had reached an equilibrium, it may be presumed that the same agencies which gradually built up the bar, namely, the tides and waves, would renew their work, and, if left alone, would probably in time close the channel and again reduce the Saharan sea to a desert. Still, the influence of these agencies could in part be counteracted by the current which must flow out of the channel.

The volume of the rivers which now flow into El Juf would no doubt be greatly increased by the additional rain-fall incident to the presence of so large a body of water. The action of the tides and currents could be guarded by breakwaters and entirely controlled by locks. In these alone it is believed must consist the trifling expense of an enterprise of far-reaching results. The only important objection which has thus far been urged against the undertaking has arisen in the apprehensions expressed by a few scientists that the evaporation produced by so large and so shallow a body of water, exposed to the tropical sun, would be sufficient to deluge northern Europe with incessant rains, and to reduce materially the temperature in all the countries north of the Alps. It has even been feared that winds freighted with moisture on crossing the cold summits of the Alps, would precipitate vast volumes of water and produce a degree of cold which would give Denmark and northern Germany a semi-Arctic climate and produce a glacial epoch farther north. Is it not probable that all such apprehensions arise out of a misunderstanding as to the topography of the Sahara and North Africa? The entire region to be flooded is practically shut in by mountain-chains on all sides. The Atlas Mountains on the north, lifting their snow-clad peaks in some instances 12,000 feet, afford a sufficient bulwark for the protection of Europe from increased humidity. The only possible northerly outlet for air currents from El Juf would be across Tunis in a north-easterly direction over the widest part of the Mediterranean. Currents moving in that direction, if they reached Europe at all, would touch the shores of Greece after they had lost most of their humidity. M. de Lesseps, after a careful examination of the question, is convinced that it would result in the general

improvement of the climate of Europe rather than to its detriment. The advantage of the increased evaporation to North Africa cannot be overestimated. The snow-clad cliffs of Aban, lying to the east of the proposed sea, and the Kong Mountains to the south, would bring down upon the parched desert grateful rains, which, with the assistance of cultivation, would in time no doubt redeem thousands of square miles from the desolation of the sands.

In estimating the advantages arising from the flooding of El Juf we must consider its relation to Central Africa on the one hand and to the civilized world on the other.

One hundred miles south of the limits of the proposed sea is situated the commercial metropolis of the heart of Africa—Timbuctoo, called "the queen of the desert." This venerable city, founded A. D. 1176 by the Berbers, the ancient people of North Africa, is situated six miles north of the Niger, when the river is at its ordinary level. In the rainy season, however, its western gates are washed by the overflow of the river. The city contains at present 20,000 inhabitants, though formerly it was much larger. Its regularly laid streets, well-built houses and magnificent mosques, with lofty minarets, present an imposing appearance, a picture of inviting beauty as it breaks upon the vision of the weary voyager of the desert. The Zangereber or great mosque is a stately edifice with nine naves, a lofty tower, and measures 286 by 212 feet. Several other mosques of importance and great age, add to the attractions of this strange and wonderful city. From time to time fabulous stories of the wealth and importance of Timbuctoo reached Europe, until it came to be regarded as a paradise of magnificence and luxury which had never been transcended in Arabian story.

The commercial advantages of the city, however, constitute its chief importance. From its port (Kabara), the Niger and its tributaries are navigable for thousands of miles. The wealth of Central Africa is brought to its gates, and is ready to be poured into its markets. The great central region bears the general name Soudan. Its area is estimated at 631,000 square miles, or five times the area of the British Isles. It has three physical divisions, the basin of the Niger, the district of Lake Chad, and the country between Lake Chad and the upper Nile. The Niger in its wanderings traverses 3,500 miles; but this vast circuit, embracing all the southern half of North-

Central Africa, is inaccessible from the ocean because of the rapids which block the river's mouth, and the general unhealthiness of its banks as it approaches the Atlantic. With this exception the vast region which it traverses, as well as most of Soudan, is pronounced salubrious.

Soudan has a population of 38,800,000, chiefly Fellatahs and Mandingoes. The latter people are supposed to be descendants of the Egyptians, as their language is quite similar to the Coptic. They are intelligent and progressive, pursuing agriculture, engaging in manufactures and trade, and furthermore support well-conducted public schools. Their language is written in Arabic and is said to be the richest of the African languages. The Fellatahs are, however, the superior and dominant race. Their fine features and noble bearing distinguish them as the people of intelligence and influence who must become the auxiliaries of the Europeans in the regeneration of Africa. Their love of knowledge, and their devotion to the humane principles of government and social life, have wrought great changes in the districts over which they have extended their dominion. Their color is not darker than that of Spaniards and Portuguese. The products of Soudan are cotton, the tamarind, bread-fruit, kajiji, the kola-nut, sugar-cane, rice, wheat, maize, barley, game in abundance, horses, cattle, asses, sheep, goats and camels. The minerals are gold, iron and copper. At present the foreign trade with Soudan amounts to \$20,000,000 per annum, though the caravans are obliged to traverse 2,000 miles of desert between Timbuctoo and the ports of Morocco, Algeria, Tunis, and Tripoli.

Were the Sahara flooded, and were it possible to steam from Liverpool or New York to Timbuctoo, the volume of trade would develop immensely. Port St. Bartholomew, the harbor which Mr. Mackenzie has established near Cape Juby, on the coast of Africa, is distant only 80 miles from the Canary Islands, and is within 1,600 miles of Liverpool. Cape Juby is distant less than 800 miles from Timbuctoo. The depression of El Juf approaches within 100 miles of the city. The flooding of El Juf would consequently bring Timbuctoo within ten or twelve days' steam of Liverpool. Ultimately, no doubt, a ship-canal would be constructed between the sea of El Juf and the Niger,—a distance of 100 miles,—with its thousands of miles of uninterrupted navigation. This accomplished, the heart of

Africa will be thrown open to the world, and the "Dark Continent" will exist only as a dream of the past.

As previously intimated, the French engineer, Captain Roudaire, and the celebrated M. Ferdinand de Lesseps, whose energy and skill in the construction of the Suez Canal made Africa an island, are now taking steps with a view to flooding the *chotts*, or basins of Tunis and Algeria, from the Mediterranean. The exact extent of these depressions, if known, has not been publicly stated. The preliminary work of leveling, by Captain Roudaire, showed the depressions to be lower than the level of the sea, and demonstrated the necessity of making borings in order to ascertain whether rocks underlie the sand which composes the intervening ridges. At the meeting of the French Academy of Sciences, held December 9, 1878, M. de Lesseps gave an account of his visit to Tunis in company with Captain Roudaire and his expedition. The exploring party arrived in the Gulf of Cables in the latter part of November of the same year. The tidal rise and fall was ascertained to amount to two and a half meters in the gulf, while the average tidal variation of the Mediterranean is only three-tenths of a meter. Midway between the extreme limits of the Gulf of Cables is the mouth of the Melah, a small river selected by Captain Roudaire to permit the flow of the water into the *chotts*. The tide ascends this river for several kilometers, retiring with such force that, at a distance of 500 meters from the shore, opposite the river's mouth, it has scoured out a channel forty fathoms deep. M. de Lesseps and Roudaire, with their staff, ascended the river Melah a distance of fifteen kilometers, and ascertained that both its banks are formed of compressed sand, without a vestige of rock. This sand, resembling the compressed sand of the Bitter lakes and the Suez Canal, yielded the following analysis:

Clay	66.00
Iron peroxide.....	2.00
Calcium carbonate.....	9.00
Magnesia.....	3.60
Sodium chloride.....	3.40
Calcium sulphate.....	5.90
Water and carbonic acid.....	20.00
	99.00*

The borings which M. Roudaire has undertaken, over a length of 100 leagues and a circumference of 500 leagues, will

* The sum of the above is actually 109.90, but we have given it as reported by M. de Lesseps.

occupy six months or more, and not till this work is completed can an estimate be made of the cost of letting the sea into the basins of Tunis and Algeria. The French Chamber has provided for the work of leveling, and has appropriated 40,000 francs to meet the expense of the borings, with the promise of additional assistance. Besides detailing one of the officers of his palace to accompany M. Roudaire with an escort of soldiers, the Bey of Tunis has ordered all government officials to afford every possible assistance to the French expedition. At a meeting of the Academy held December 30th, M. de Lesseps read a letter from M. Roudaire communicating the fact that the borings were commenced at the summit of the ridge between the basins and the sea, and although a depth of 18 meters had been reached, nothing but sand and water had been encountered. A subsequent communication from Captain Roudaire, dated Cabes, January 30th, 1879, states that at the summit boring, after the marls had been penetrated to a depth of forty meters, a thin stratum or bank of limestone was reached. This was regarded as presenting no serious obstruction because of the sharpness of its dip toward the north,—a fact which was ascertained by borings south of the summit. At the above date borings at the Gulf coast and by the River Melah at Oudref had been completed. Although in each case a depth of ten meters below low water was reached, nothing was encountered except sand and clay marls. A boring in the *chott* of Hamesmet pushed to a depth of two meters below low tide revealed no obstructions. At a point midway between the sea and the *chotts* pure water was found, obviating the expense of transporting drinking water during the preliminary operations. The cheapness of labor in the desert will contribute greatly to the success of the enterprise. Bands of Arabs coming from all quarters have applied to Captain Roudaire for employment, asking but 90 centimes per day. Just how far the Tunisian sea will extend toward the center of the desert, cannot, at this stage of the enterprise, be conjectured. Whether it will be possible to effect a connection between it and the great depression of El Juf is unknown and doubtful. Should it extend as far inland as M. Roudaire contemplates making borings, namely, one hundred leagues, its southern limit will still be about one thousand five hundred miles from Timbuctoo, or about twice the distance of Timbuctoo from Port St. Bartholomew.

The importance of flooding the Sahara and opening water communication with Soudan, from other than merely commercial considerations, cannot be estimated. In 1872, several authorities, among them Professor Berlioux of Lyons, estimated the annual export of slaves from Africa, including the destruction of life during transit, at upward of half a million. According to Sir Bartle Frere, the Superior of the Mission Convent of Central Africa fixes the annual (in 1872-3) drainage of human life from Africa, consequent upon slavery, at 1,000,000 lives. Lieutenant Young, writing from Lake Nyassa in 1876, describes the long lines of bleached human bones which he saw stretching toward the north-east, and states that the ground was covered with thousands of skeletons which mark the track of the slave-driver. Is it not to be hoped that the opening of Africa would strike a blow, both final and fatal, to this horrible trade? Would not the introduction of a Christian civilization into this vast territory be one of the most magnificent missionary enterprises recorded in history?

The flooding of the Sahara promises to interest the antiquarian and historian as well as the merchant and philanthropist. Both the British and French ministers to Morocco have recently called attention to a collection of ancient manuscripts deposited in the town of Tishit, 300 miles north-west of Timbuctoo. A sculptured obelisk covered with what are regarded as Lybian characters stands solitary in the desert, not far from the north-western extremity of El Juf. Whether the libraries of Tishit are Punic, containing the history of ancient Carthage, or Arabic, reflecting the wisdom of that enlightened people who, in the eighth century, carried science to a perfection which was not attained in Christendom for eight centuries subsequently, it matters not, as in either event their discovery would prove a rich acquisition to literature.

Prior to the execution of the grand scheme which will transform El Juf into a sea and cause the surrounding desert to "blossom as the rose," certain preliminary steps are necessary. Some of these have already been taken by Mr. Mackenzie. First was the establishment of a harbor and trading-station at Port St. Bartholomew on the coast opposite the Canaries, and distant only a few miles from Cape Juby, the point at which the waters are to be admitted to the basin of El Juf. The native chiefs were found very friendly and willing to make any

desired concessions, provided trade should be opened with them. Mr. Mackenzie has also marked out a new route leading from Port St. Bartholomew to Timbuctoo, distant only 800 miles, being 1,200 miles shorter than any other route leading from the coast to Timbuctoo. This line of communication, known as the "Wadan Route," skirting the western and southern limits of El Juf, besides being so much shorter than all others, has the advantage of having forty-two excellent stations, and what is far more desirable, passes through the territory of a friendly and commercial people, who pledge themselves to further and protect the interests of trade.

Mr. Mackenzie estimates that the establishment of the station at Port St. Bartholomew will soon increase the foreign commerce of Timbuctoo from \$20,000,000 to \$60,000,000 per annum. So, even if the enterprise to which this is auxiliary is never carried to success, at least a new route to the center of Africa has been established.

Although the basin of El Juf has been sufficiently examined to afford assurance that its submergence will not disturb the residence or rights of any of the inhabitants of the desert, but on the contrary visit untold blessings upon the vast region which environs it, still Mr. Mackenzie deems it necessary that a thorough survey of its entire boundaries and depth should be made

prior to the admission of the sea. M. de Lesseps, in his recent visit to Tunis and the adjacent desert, found that the elevation of the oases in the northern Sahara ranges from thirty to forty meters above the level of the Mediterranean, while the desert itself is considerably below sea-level. The work of exploring thoroughly so large a district as El Juf, however, can only be accomplished after the confidence and co-operation of the natives have been gained through the commercial intercourse which will spring up with the opening of the "Wadan Route."

As Mr. Mackenzie has made the preliminary arrangements for putting Port St. Bartholomew into communication with Timbuctoo, we may look for the completion of his magnificent scheme and the consequent opening of Africa to commerce and civilization at no distant day. Nor do we hope for anything less than success for the French expedition. Either of these audacious movements may by one bold stroke solve the mystery of the great continent and earn for its author the gratitude of the world of science.*

* Obligations are hereby expressed to Lieutenant-Commander Francis M. Green, U. S. N., of the Hydrographic Office, Washington, who, at the instance of Professor Spencer F. Baird, has furnished for this article valuable material relative to the French expedition.

EDISON'S INVENTIONS. II.*

THE CARBON BUTTON AND ITS OFFSPRING.

Nor the least curious in the analytical study of Mr. Edison's numerous inventions is the readily observable peculiarity that the most important of them are the offspring or natural outgrowth of parent germs involving the discovery of previously hidden properties of nature, on which they depend and by which they are rendered susceptible of classification. The electro-motograph, treated of in the last paper, was an illustration in point. There the parent discovery or germ was the fact that the passage of an electric current through a substance saturated with certain chemicals diminished the friction normally existing between the surface of such substance and the electricity-conducting

metal resting upon it. On this principle Mr. Edison constructed his automatic telegraph, which transmits telegrams at the rate of fifteen hundred words per minute, and devised the application to lessen the friction of machinery, the appliance for magnifying and reproducing sound electrically transmitted from a distance, and the apparatus for increasing the speed of telegraphic transmission over long ocean cables. From other beneficent scientific germs, as we shall see, he has deduced various other valuable practical applications.

This peculiarity is noticeable in the "carbon button," which is the generic title Mr. Edison has given to the various substances

evinced the characteristics so strongly displayed by compressed carbon when subjected to electrical action. The basis of this, the parent discovery, is the principle that when a current of electricity is passed through a quantity of finely divided conducting matter, such as finely divided metals, conducting sulphides, oxides, graphite or carbon in its various forms, the slightest pressure on such finely divided conductor varies the strength of the electric current by diminishing the resistance offered to its passage. From this germ have sprung: 1. the transmitting telephone, 2. the micro-tasimeter or instrument for the detection of infinitesimal quantities of heat, 3. the pressure relay, 4. the carbon rheostat,—the two latter valuable acquisitions to practical telegraphy,—5. the hygrometer or instrument for detecting infinitesimal moisture, and 6. the odorometer, or instrument for detecting the presence of certain chemical vapors. And these curious properties and powers of the original discovery by no means form its limit, for Mr. Edison has already outlined other applications which give promise of much practical value.

The discovery of the property involved in the carbon button was made by Mr. Edison in the year 1873, while he was prosecuting experiments looking toward the more rapid transmission of messages over long submarine cables. To carry on his experiments properly, it was necessary to have, in small space, large resistance to the passage of the electric current, and for this purpose he pressed finely divided graphite carbon into tubes of glass, and connected many tubes together, the whole number offering a resistance to the passage of the electric current many times greater than is offered by the Atlantic cable. To these tubes contained in boxes, subsidiary apparatus was connected to imitate as near as possible all the phenomena which arise in telegraphic transmission over long cables. When the metallic ends inserted in the tubes were pressed upon the carbon or set in vibration, Mr. Edison noticed a diminution of resistance to the passage of the current; this susceptibility to pressure on the part of the carbon rendered the whole apparatus unreliable for nice experiments and it was abandoned as a failure. Here, then, we perceive the first glimmerings of light on the future telephone. The discovery of the peculiar property possessed by finely divided conductors, namely, that of having their electric resistance varied by pressure, was an accomplished fact, but its

importance was unknown and unappreciated. The finely divided conductors did what Mr. Edison wanted them to do, namely, give great resistance in small space; but they did more: their great delicacy rendered uniformity of resistance almost impossible, as the slightest pressure caused variation. And so it came about that the discovery was permitted to slumber.

THE TELEPHONE.

THE succeeding steps in the history of the carbon button oblige us to follow the progress of the telephone, for the two are inseparably connected. In June, 1875, Mr. Edison began a series of experiments with a system of multiple telegraphy, having for its basis the transmission of acoustic vibrations. Among the first instruments devised by him for the purpose were a transmitter and receiver, shown in Figs. 1 and 2 respectively.

In Fig. 1, A and B are tuning-forks, placed over electro-magnets and made to vibrate a certain number of times per second. Each carries at its end a plunger or rod, C and C', which dip into the chambers of water, W and W', so that the vibrations of the plungers or rods which do not touch the conducting wires, D and D', will cause variations in the re-

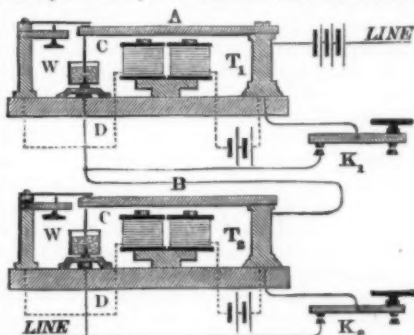


FIG. 1.—EDISON'S ACOUSTIC TRANSMITTER.

sistance, and consequently in the strength, of the current passing through the rods, C and C'.

In the receiving instrument used by Mr. Edison at the same time [Fig. 2], R¹ and R² are telescopic tubes of metal, by the lengthening or shortening of which the column of air in either could be adjusted to vibrate in unison with the proper note of the fork whose signals were to be received by each particular instrument. An iron diaphragm was soldered to one end of these tubes, and the latter placed in such a manner as to bring the diaphragm of each re-

spectively in front of an electro-magnet, which in action would cause them to vibrate.

The first attempt by Mr. Edison at an

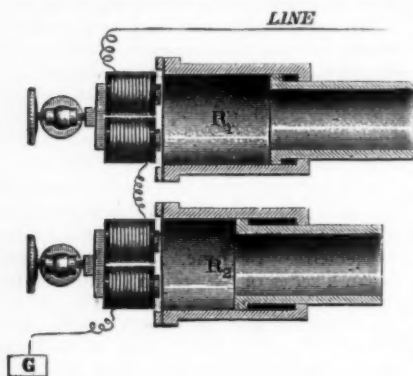


FIG. 2.—EDISON'S RESONANT RECEIVER.

articulating telephone was in July, 1875, some months before Professor Bell brought out his telephone. Previous to that time, Mr. Edison's telephonic experimenting had all been in connection with acoustic transmission other than the human voice. A short time before, he had seen a description of the telephone of Philip Reiss, of Germany, invented in 1861. This was an instrument for electrically transmitting vocal musical sounds. It was entirely incapable of transmitting the complex sound-waves of the human voice, and at its best it furnished but a meager basis of what subsequently became the articulating telephone, for it simply set Mr. Edison's mind working upon the subject of articulating telephony. In its standard form, the transmitter of Reiss, at the time Mr. Edison's attention was called to it, consisted of a diaphragm so arranged that its vibrations opened and closed an electric circuit with a rapidity corresponding to the number of vibrations. The receiving instrument consisted of a coil or helix, inclosing an iron rod and fixed on a hollow sounding-board,—being founded on Professor Page's discovery that iron bars, when magnetized by means of an electric current, become slightly elongated, and at each interruption to the passage of the current are restored to their normal length. These various elongations and shortenings of the iron bar inclosed in the helix correspond with the vibrations of the diaphragm, thereby emitting an audible sound at each change in length, such sound being magnified by the hollow sounding-box. The best

result that had been obtained from this system was the reproduction at the distant end of the wire of the pitch of the sound; the intensity and quality of the sound could not be transmitted or reproduced.

One of Mr. Edison's experiments was to use a modification of the Reiss transmitter in connection with his own resonant receiver [Fig. 2]. Among the changes in the form of transmitter which he applied, was the introduction, between the points, of drops of water; but rapid decomposition of the water took place, leaving a sediment upon the platinum points, and preventing satisfactory results. On the same principle, he next applied sponge-paper and felting saturated with various solutions, and also points immersed in electrolytic cells (or cells containing water) whose conductivity was increased by the mixture of appropriate salines.

From none of these experiments, however, could he obtain satisfaction. His objective point was a telephone which would transmit the sound-waves of the human voice. He was convinced that such a result could be obtained and that its accomplishment was only a question of time and research. After much diligent labor in this direction, each step gradually paving the way for what was to come, and intensifying the determination of the inventor, he finally laid aside the line of investigation in which he had so long been engaged and branched off into another. He had proceeded far enough to learn the important fact that, for the object in view, the use of decomposable fluids was practically a waste of time.

Mr. Edison's new departure in his telephonic researches was to vary the resistance of the circuit proportionally with the amplitude of the vibrations of the diaphragm, and for this purpose he used at first a multiplicity of platinum points, springs and resistance coils, all of which were designed to be controlled by the movements of the diaphragm. None, however, gave satisfaction. The experimenting continued until the spring of 1876, when another change of plan having been made, Mr. Edison succeeded in utilizing the great resistance offered to the passage of the electric current by thin films of plumbago on white Arkansas oil-stone and on ground-glass. Here for the first time he succeeded in conveying the sound-waves of the human voice by electricity, being many articulated sentences transmitted. It was like the first sign of land after a long and dreary voyage over the ocean.

Fig. 3. shows the device employed. A metal spring, L, attached to a diaphragm, D, vibrating in a horizontal plane, has a roller on one end which rests upon a film of plumbago upon Arkansas oil-stone, S. C is a metal clamp resting also on the film and connected with the line. M is the mouth-piece. The spring, L, and clamp, C, being connected to the current, the film of plumbago becomes part of the current, and the vibrations of the spring to and from the clamp, caused by the voice spoken into the mouth-

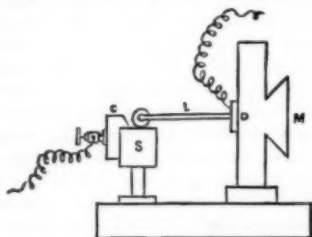


FIG. 3.—EDISON'S FIRST ARTICULATING TELEPHONE.

piece, vary the resistance of the current by including in the circuit more or less of the film of plumbago.

But encouraging as were the results of this and kindred devices, there remained great difficulties in the path of complete success, chief among them being the disturbances which the devices caused in the true vibrations of the diaphragm. Modification succeeded modification, but the difficulties still remained—to be overcome only by the carbon button.

Disappointed but not discouraged by the numerous obstacles in his path, Mr. Edison, in January, 1877, bethought him of the discovery which he had made in 1873 (as before mentioned) of the principle that under pressure the electrical conductivity of certain semi-conductors is greatly varied. It will be further remembered that the excessive delicacy of such variation was the cause of Mr. Edison having laid the discovery aside as unsuitable for application to rheostats. Taking up the principle, he now devised numerous forms of application, one of which is shown in Fig. 4. A A is a diaphragm carrying at its center a yielding spring, B, faced with platinum. C C is a stick of crude plumbago combined in proportion with dry powders and resins and held in the cup, D, and moreover adjustable by means of the screw E. When working, the plumbago was adjusted so as lightly to touch the platinum on the yielding spring, B. The vibrations of the

voice spoken into the mouth-piece, M, caused the platina to press upon the plumbago with a pressure corresponding to the amplitude of the vibrations, thus varying the resistance.

After conducting a long series of experiments with solid materials on the principle involved in Fig. 4, though with various modifications, Mr. Edison abandoned the solids and substituted therefor tufts of conducting fiber, consisting of floss silk coated with plumbago and other semi-conductors. One of the chief difficulties he experienced in obtaining a good articulating telephone was the too great delicacy of the apparatus; for, while giving poor articulation it showed a wonderful degree of sensitiveness to pressure, reproducing the slightest sounds in a highly magnified tone. This property of the incipient telephone, of being able to magnify sound, was often about this time the subject of much thought to Mr. Edison, who, while admiring it as a curiosity of science, was nevertheless very anxious to get it under control, since it readily magnified such delicate noises as that made by moving the finger on a piece of board, or that caused by a breath. The apparatus which utilized this property was afterward named the "microphone" by Professor Hughes of London, who investigated the subject, and made a number of curious devices for exhibiting the property. The results from the various devices tried by Mr. Edison for the

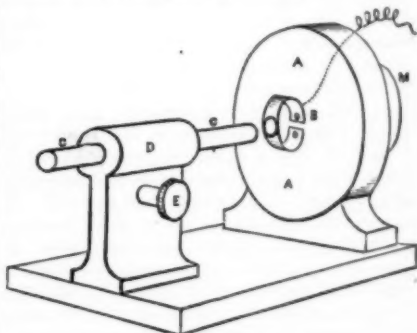


FIG. 4.—CARBON TELEPHONE.

purpose of reducing the delicacy of the instrument were much better, but while the volume of sound was great, the articulation was still indistinct. Besides, the instruments needed frequent adjustment to be kept in proper working order. About this time another truth dawned upon the inventor. The normal resistance of the finely divided conductors in the form then used was too

great, and Mr. Edison readily saw that the desideratum was a form of the semi-conductor of such a character that while the normal resistance it offered to the passage of the current would be small, its essential property of varying the resistance upon slight pressure would not be impaired. With this principle in view, he constructed a transmitter having a button of the solid plumbago employed by electrotypers. From this he obtained excellent results, but the volume of sound was deficient. To improve in this line the inventor then began an exhaustive series of experiments, in search of some finely divided conducting substance, to act better in the forth of a button than plumbago. In the course of such experiments he used conducting oxides, sulphides and various other partial conductors, besides finely divided metals. From all, or nearly all, articulation of an imperfect character was obtained.

Having noticed one day in the laboratory the blackened chimney of a petroleum lamp that had been smoking the night before, he was struck with the intense blackness of the soot, and impelled by curiosity, scraped off a small quantity for examination. A few weeks later, it occurred to him to mold the lamp-black in the form of a button, and try it as a conductor in connection with the incomplete telephone. The result was surprising; the articulation came clear and distinct, and the overjoyed inventor celebrated his discovery by forgetting all about his supper and remaining at work until the dawn of day reminded him that sleep as well as science demanded a portion of his time. It would exceed the limits of this paper to recount, even by passing allusion, the various forms of the main principle and the many ingenious contrivances subsequently experimented on by Mr. Edison both in connection with the then completed telephone and various other interesting scientific appliances. The world has heard conversation carried on by the telephone between persons hundreds of miles away, the voice of the distant speaker being recognized as readily as if he were face to face,—a feat which only a few years ago the most distinguished scientific men would hardly have believed possible. It has read the accounts of the sensitiveness of the tasimeter responding to the heat of distant stars, and has wondered at the marvelous power the principle displays when adapted for the amplification of sound, as in the Hughes microphone, which distinctly reproduces such faint sounds as those made by the footsteps of a fly, and

makes the drawing of a breath sound like the roar of the wind in a forest.

THE CARBON RHEOSTAT.

OFTEN in practical telegraphy it becomes necessary for the operator, especially if he be working a duplex or quadruplex wire, to throw in resistance to the passage of the electric current over the line. For this purpose rheostats are used. They consist of bobbins or coils of fine wire in a box, so arranged that by inserting small brass plugs into corresponding holes in the box, more or less of the wire is made part of the electric circuit. The wire being exceedingly fine, it offers great resistance to the passage of the electric current, hence much resistance can be cooped up in a very small space. "Balancing the quad," as practical telegraphers call the process of adjusting the quadruplex apparatus, is an operation that calls for frequent use of a rheostat, and much inconvenience results from the length of

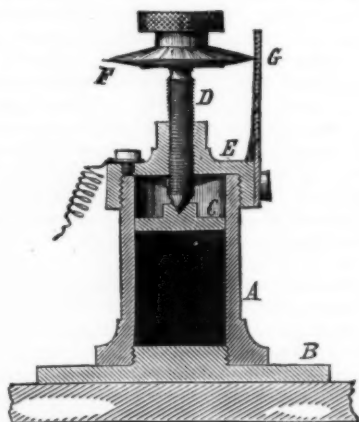


FIG. 5.—VERTICAL SECTION OF CARBON RHEOSTAT.

time consumed in its proper manipulation. To remedy this difficulty, Mr. Edison devised a "carbon rheostat," working upon the principle of semi-conductors changing their resistance under pressure,—the principle which we have just considered in his telephone.

Fig. 5 shows a vertical section of this invention. A is a hollow cylinder of vulcanite containing fifty disks of silk that have been saturated with sizing and well filled with fine plumbago and dried. These are surmounted by a plate of metal, C, which can be raised or lowered by turning the screw, D. The disks can thus be subjected to any

degree of pressure, and the rheostat being placed in circuit, a corresponding resistance is thus thrown into the line. F is a circular scale attached to the screw, D, and marking off on the graduated upright, G, the quantity of pressure on the disks. The instrument has been found in telegraph offices to be of much practical value on lines where small battery power is employed.

THE MICRO-TASIMETER.

THE invention of the micro-tasimeter was due to the discovery made by Mr. Edison while experimenting on the carbon telephone that the heat of his hand threw the instrument out of order. He had noticed that almost every time he took up the telephone he found it necessary to adjust it, and as the apparatus was well made in all its parts he could not understand why such care and attention were necessary. He finally discovered that the change in adjustment was rendered necessary by the elongation of the handle of the telephone, such elongation being due to the heat from the hand of the holder. Iron handles were substituted, but the sensitiveness continued, and was accompanied with a delicate noise (audible on pressing the instrument close to the ear) that sounded like a faint metallic ringing in the distance. To this phenomenon Mr. Edison gave the name of "molecular music," attributing it to the noise made by the changing of the molecules of the metal in the expansion and contraction. Having thus learned that small quantities of heat could in this manner be detected, the inventor left the telephone for a brief time, to indulge in a little scientific by-play on the new discovery. A series of experiments evolved the fact that the best method of application was by the use of a strip of vulcanite whose sensitiveness to heat made it particularly desirable. The next step was the perfected micro-tasimeter, a vertical section of which is shown in Fig. 6.

In the vertical section, Fig. 6, A is a strip of vulcanite rubber firmly clamped at B, its lower end fitting into a slot in the metal plate, M, which rests on the carbon button, C. By wires leading from the upper plate, M, and the lower plate, P, the button is in electric circuit with a battery and delicate galvanometer (not shown in the cut). The funnel, F, serves to focus heat upon the vulcanite strip, A. Any elongation of the strip (the result of increased temperature) causes pressure upon the carbon button, C, altering the resistance to the pas-

sage of the current flowing through it to the galvanometer, which variation the galvanometer faithfully indicates by deflection of its needle. In order to ascertain the exact amount of expansion in decimals of an inch, the screw, S, seen in front of the dial, D, is turned until the deflection previously caused by the change of temperature is reproduced. The screw works a second screw, causing the vulcanite strip to descend or ascend, and the exact distance through which the rod moves is indicated by the needle, N, on the dial. The use of vulcanite as the strip is not essential; other substances, susceptible to expansion and contraction by change of temperature, may be employed, but the most satisfactory results have been obtained by the employment of vulcanite.

The first practical test of the power of the tasimeter was made by Mr. Edison on the night of July 29, 1878, at Rawlins, Wyoming Territory, whither he had gone as a member of Dr. Draper's expedition to view the eclipse of the sun. The extremely sensitive character of the tasimeter made it an object of much interest to the scientists composing the expedition, and accordingly every preparation was made to have a thorough test of its powers on the sun's corona during the few moments of totality. The night previous to the eclipse all was got in readiness for a preliminary test to insure the proper working of the instrument, and the star Arcturus was selected as the object of experiment. The tasimeter was placed on a stand firmly fixed on the earthen floor of a wooden shed at the base of a hill, and so arranged that local variations in the temperature, such for instance as that produced by the approach of a person, would affect it only at a minimum. For this purpose the apparatus was surrounded by ice in water, which kept the temperature uniform for a considerable period. A highly sensitive galvanometer, on whose needle was attached a tiny mirror of trifling weight, was included in the electric circuit with a few cells of battery and the tasimeter. Opposite the galvanometer on the floor was placed a graduated horizontal scale, behind which was a lamp which threw a ray of light through a slit in the bottom of the scale upon the tiny mirror attached to the needle of the galvanometer. The working of the apparatus was as follows: A large telescope was adjusted to the star Arcturus, the small end or eye-piece of the telescope being placed into the funnel of the tasimeter, so that the ray of light from the star was focused upon

the vulcanite strip in the tasimeter. The heat from the ray of starlight thus focused affected the sensitive vulcanite, causing a

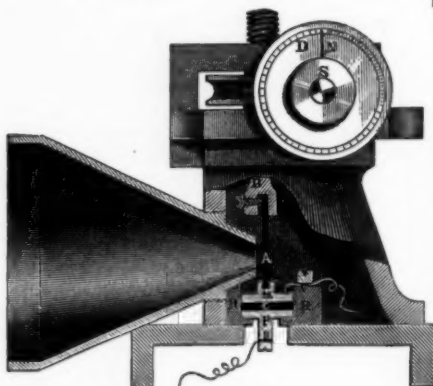


FIG. 6.—VERTICAL SECTION OF MICRO-TASIMETER.

minute elongation and a consequent pressure of the vulcanite upon the carbon button, which pressure varied the electric current passing through the button, the variation being denoted by the deflection of the galvanometer needle. Now the tiny mirror fastened to the needle of the galvanometer moved of course with it, reflecting the ray of light from the lamp before mentioned upon the graduated scale. The slightest fluctuation of the galvanometer needle caused considerable fluctuation of the ray of light on the graduated scale, so that the most delicate changes were made observable. When all was in readiness, the telescope was adjusted to the star, while Mr. Edison, on his hands and knees, eagerly watched the fine lines of the graduated scale. Several minutes passed by and no word came from the anxious inventor. The ray of light stood at zero, moving neither to right nor left, and the astronomers began to doubt the powers of the instrument. "It's strange," muttered Mr. Edison, as he watched the ray of light in its stubborn adherence to zero; "it ought to work, and I'm sure it will." Then he began examining the connections, and soon discovered the cause of the trouble: a wire had been improperly arranged. The obstacle removed, the telescope was once more adjusted to the star, and scarcely had the ray been focused when the light reflected from the mirror moved over twenty degrees of the graduated scale, a result repeated several times.

The day of the eclipse saw Mr. Edison

again at his post, getting the instrument in readiness for the test on the heat of the corona. The time set by nature for the continuation of the total eclipse was two minutes and fifty seconds, beginning at 3:15 P. M., local time, and in this small interval the measurement of the corona's heat had to be taken, if at all. The success of the night previous had made all the party confident of happy results with the delicate instrument, and it was therefore with no little chagrin and disappointment that the assembled astronomers perceived the wind gradually increasing, rocking the frail structure in which the tasimeter was located, and interfering with its delicacy. By noon the gale had become a tornado, and the prospects of success were exceedingly poor. In vain Mr. Edison, assisted by a dozen stalwart workmen, propped up the little shed with boards to keep it from swaying. It was too late at that time to remove the instrument and its accompaniments to a place of greater stability, for, in less than ten minutes, the precious moments of totality would be at hand. Fortunately, however, just as all hope of a successful experiment had been abandoned, the wind suddenly subsided. Mr. Edison hastened to take advantage of the opportunity. The moon was then about seven-eighths across the face of the sun. The telescope was held in position while the inventor adjusted the delicate tasimeter. This operation consumed the precious minutes, one after another, until at last the sun was totally eclipsed; but still the tasimeter was unprepared for its task. At length, just as the chronometer indicated one-half minute more of totality, the instrument was brought into action and the heat from the sun's corona was concentrated on the delicate vulcanite and the ray of light ran clear off the graduated scale,—thus proving that this instrument is remarkably sensitive to heat and opening a wide field for future experiments in the measurement of the heat of heavenly bodies.

TO DETECT THE APPROACH OF ICEBERGS.

AN exceedingly simple, but highly useful, adaptation of the carbon button in connection with the tasimeter principle is suggested for use in vessels at sea, warning navigators of the approach of icebergs long before there is any danger of encountering them. The apparatus would consist of a carbon button in a small tube of glass, resting upon one end of a little rod of one of the sub-

stances impressionable to changes in temperature,—the whole placed in a tube or pipe attached to the bottom of the vessel in such a way that the water continually flows through it, but does not come in contact with the electrical apparatus. The carbon button could be kept in electrical connection with a galvanometer placed in the captain's office or elsewhere on the ship. The substance pressing upon the carbon button, being susceptible to changes in temperature, would contract or expand in response to the heat or cold of the water flowing around it, such expansion or contraction acting upon the carbon button and increasing or diminishing the pressure upon it, thus deflecting the needle of the galvanometer. By practice, a sea-captain would thus be enabled not only to know of the approach of icebergs, but also to tell approximately their distance. There are various other devices in this connection which, if thoroughly investigated by navigators, might be made of great service at sea.

THE PRESSURE RELAY.

IN the pressure relay, an instrument for repeating from one electric circuit into another currents of variable strengths, Mr. Edison has made another adaptation of the carbon button. In this he uses thin disks of plumbago as the finely divided substance, the more delicate lamp-black being too sensitive for the work required. Upon the disks of plumbago, A A [Fig. 7], is laid the armature, B, which is provided with a binding post, C, for clamping the local battery wire. The cores of the main line (or relay) magnet, M, the plumbago and the armature are included in a local circuit which also contains an ordinary "sounder," N, and cells of local battery. The main line magnet is inserted in the ordinary manner. The working of the instrument is as follows: when the main circuit is broken the attraction for the armature ceases and the only pressure upon the plumbago disks is that caused by the weight of the armature itself. With only this pressure the resistance of the plumbago to the passage of the local current is considerable; with this resistance in the local circuit the sounder remains open. If now the main circuit be closed, a powerful attraction takes place between the poles of the main line magnet and its armature, causing a corresponding increase in the pressure upon the plumbago disks and reducing their resistance to a fraction of what it previously had been; consequently the sounder closes. Thus far the

working differs but little from the ordinary relay and sounder. But the great difference between this relay and those in common use is that it repeats from one circuit to another the relative strengths of the current in the first circuit. For example, if a weak cur-

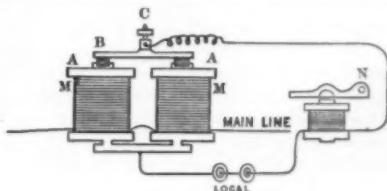


FIG. 7.—PRESSURE RELAY.

rent circulates upon the line in which a relay magnet is inserted the attraction for its armature will be small, the pressure upon the plumbago disks will be light, consequently a weak current will circulate within the second circuit; and on the contrary, if the current in the first circuit be strong, the pressure upon the plumbago disks will be increased and the current of the second circuit will be increased in proportion. No adjustment is ever necessary. With some modifications the apparatus may be used as a telephonic repeater.

THE HYGROMETER.

IN the course of his experiments on the tasimeter, Mr. Edison used a variety of substances as the strip or rod to press upon the carbon button, and among the number gelatine; and as the latter exhibited a wonderful sensitiveness to moisture, he soon set about constructing an instrument which would utilize this phenomenon. Fig. 8 shows the device for this purpose. A is a strip of gelatine, one end of which

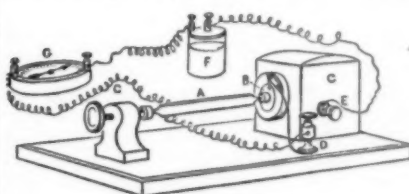


FIG. 8.—THE HYGROMETER.

presses on the carbon button, B. The latter is in electric circuit by wires from the screw posts, E and D, to the battery, F, and the galvanometer, G. The slightest moisture acts upon the sensitive gelatine

strip, A, causing it to become more mobile and to vary the pressure upon the carbon button, B, thus varying the resistance of the latter to the passage of the electric current, which variation is denoted in the galvanometer, G. By this apparatus infinitesimal changes in the moisture of the atmosphere can be indicated, changes which are many thousand times less in quantity than those which can be indicated by the present barometer. Indeed, so sensitive is this instrument to the influence of moisture that a few drops of water on the floor have caused the galvanometer to deflect.

THE ODOROMETER.

A SIMILAR application of the carbon button is called by Mr. Edison "the odorometer." Having discovered that vulcanized rubber or ebonite was softened and made pliable as leather when immersed for several days in nitro-benzol or the artificial oil of almonds, the inventor began a series of experiments to ascertain whether the vapor from the chemical would not contract or elongate the rubber, and thus decrease or increase the pressure of the rubber upon the carbon button. When a strip of paper moistened with nitro-benzol was held within a foot of the tasimeter adjusted to detect the heat of the hand several feet distant, he was very much surprised to find that the galvanometer, which was in electric circuit with the tasimeter, produced a movement of the spot of light. Continuing his experiments, he ascertained that the deflection was not due to heat or to cold produced by evaporation of the chemical, but to the fact that the vapor of the chemical acted upon the rubber near by, rendering it less stiff and consequently producing a lessening of the normal pressure upon the ebonite strip. While this phenomenon was always manifested by the vapor of the nitro-benzol, the vapor from other chemicals produced no corresponding effect. Mr. Edison also found upon experiment that if strips of other materials were substituted for the ebonite or rubber strip and coated with certain substances, a deflection of the galvanometer needle always took place, provided the coating substance was soluble in the liquid whose vapors were sought to be detected. For instance, if the coating was shellac (which is soluble in alcohol) and the alcohol was held near by so that its vapor came in contact with the shellac, the needle was instantly deflected.

Fig. 9 shows the apparatus. B is the vulcanite strip coated with shellac, resting at its

lower end upon the carbon button, A, which is placed in electric circuit by the wires leading from the screw-posts, D and E. The other screw-posts, X and Y, at the base of the apparatus, are connected with the battery and galvanometer (not shown in the cut). P is the pan or dish for receiving the chemical whose vapors are to be detected, and is placed at the bottom of a glass case. If alcohol is placed in the pan, its vapors ascend through the little holes on either side of the carbon button, A, and, acting upon the shellac, tend to soften it, making the strip of vulcanite which it coats less stiff and thus causing a diminution of its pressure upon the carbon button. The latter thereby acquires greater resistance to the passage of the electric current flowing through it, and the needle is at once deflected.

It will be noticed, in conclusion, that in all the foregoing applications of this principle, the inventor's object was simply to induce a mechanical pressure of some sort upon the carbon button. In the telephone this pressure comes from the sound waves; in the rheostat from the mere turning of the screw; in the tasimeter from the elongation of the vulcanite strip caused by increase of its temperature; in the pressure relay by the ordinary action of the armature, and so on. This pressure varies the electrical conductivity of the carbon button, and the varia-

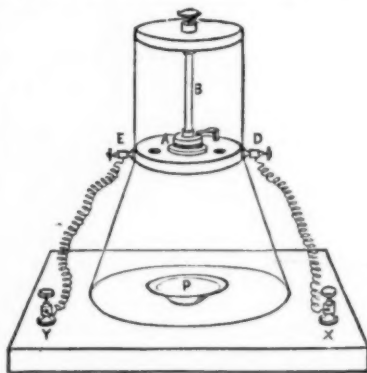


FIG. 9.—THE ODOROMETER.

tion may be indicated by the galvanometer, or in other ways. One theory of such variation is that the pressure, slight though it may be, brings closer together some of the molecules of the carbon, thus making it a more perfect conductor.

While several of these curious applications

of the carbon button in their present stage of development are objects rather of scientific curiosity than of practical benefit, the telephone has become an invention of great commercial importance. Its development within the past few years has been one of surprising rapidity. In New York, Chicago and other large cities, there already exist institutions known as telephonic exchanges, by which business men are enabled without leaving their offices to converse with persons in any part of the city. By the system, a central office (called the Telephone Exchange) is connected by electric wires with the house, office, counting-room or factory of each of the subscribers, a separate wire being used for each one. Each subscriber is provided with a list of all the subscribers to the system. If at any time

he desires to communicate with any one having a telephone, the subscriber calls through his telephone to the central office, which at once puts him into communication with any other subscriber. In this way merchants are enabled to transact much more business and with much less trouble than before. Lawyers, physicians, bankers, brokers, ship-pers, and other classes have availed themselves of the invention. In Chicago, the list of subscribers to this system already number 1,000; in New York the number is a little larger. The system is being rapidly pushed forward both in this country and in Europe, and shrewd telegraph men predict that in a few years local telephony, through the medium of telephone exchanges, will equal in magnitude, if not surpass, the great interest of the telegraph itself.

THE CONFESSION.

CAUGHT by the beams of Beauty's star,
I walk where shining summits are;
The strifes which stir the world below
I do not step aside to know.

Small need have I of scrip or store,—
My wealth lies not in golden ore;
I skim the wave whose sail expands
To waft me to enchanted lands.

I nurse a faith serene and proud;
Mixed with, I am not of, the crowd;
My galleons sail in calm and peace
Above their statelier argosies.

Mortgaged to toil, when by their side
My ways they valiantly deride;
For, him the world goes heedless by
To whom the graceful gods draw nigh.

What Raphael dreamed, what Phidias planned,
I give my days to understand;
And wrestle, undismayed, to find
The unsounded depths of Shakspeare's mind.

Though balked of brilliant fame and power,
Still welcomes me the wayside flower;
For me, smiles wreath the maiden's face,
And skies bend down to my embrace.

So, lured by Beauty's constant star,
I scale the peaks which shine afar;
What others delve for down below
I do not vex my soul to know.

TOPICS OF THE TIME.

Engraving on Wood.

"HERE in America," says Mr. Linton, in the June number of the "Atlantic," "engraving on wood has been for the last ten years steadily improving." We suppose this is true; indeed, we have no doubt of it; and we hope it is not unbecoming in us to say that, if the question were put to the artists of New York, who know all about it, they would testify that the development of SCRIBNER'S MAGAZINE has had much more to do with that improvement than any other influence or agency, if not more than all other influences and agencies combined. Yet Mr. Linton, in his long article from which we have quoted, not only makes no recognition of this fact, but indicates, by his attack on one of its most eminent engravers, that the improvement has been outside and in spite of the work done on this magazine. SCRIBNER'S MAGAZINE is mentioned as the one great sinner in the origination and propagation of a false and illegitimate style of work.

And now, before we undertake any defense of the work so severely criticised, it seems proper to pay our respects to the critic. He calls names and deals in personal allusions and illustrations, and of course must expect them in return. In this marked improvement in engraving which Mr. Linton recognizes, has he had any share? Does he maintain, as an engraver, the reputation he won in England? He claims that he has been upon the right and only legitimate track: has he made any recognizable advances in his art? We believe it is pretty well understood among publishers that Mr. Linton's work is not what it used to be. Certainly, his latest notable appearance, made in the illustration of Bryant's "Flood of Years," was one of the feeblest, most monotonous and most unsympathetic pieces of work ever issued from the American press; yet, here he engraved his own designs. We do not know of an artist who would not choose to have Cole cut his blocks rather than Linton, yet Cole is the man whom Linton has "sat down on," if we may use the slang of the time. It is the conservative old man, who has arrived at the end of his development, and sits petulantly enshrined within his conventional methods, who assumes to be god and arbiter of wood-engraving, passing judgment upon a young genius, all alive with the spirit of discovery and progress. The sympathy of artists and the well-informed public is with the young man, and their faith is in him. The question of taste involved in this attack on Mr. Cole, by a member of his own guild, we leave Mr. Linton and the public to settle. It certainly has not a very pretty look.

To those who do not understand the processes of wood-engraving, it is proper to explain that in the preparation of a block for the engraver, the picture to be engraved is in some way made upon the block. The work of the engraver is to cut the surface of the block so as to reproduce in printing every part of the picture, and the picture itself is, of course,

spoiled as the graver goes over the surface. When the block is cut, the picture is gone, except as it remains in the lines of the engraving. It will thus be seen that as fast as the engraving is done the original picture is practically defaced, and the engraver has no guide by which to correct his details, or to hold the feeling of the picture. We say this particularly, because it has an important bearing upon what is to follow.

When SCRIBNER'S MAGAZINE was established, nearly nine years ago, the men who could draw well upon the block were comparatively few. They could almost be counted on the fingers of the two hands. Drawing upon the block was an art, of and by itself. Very few of the best artists had ever attempted it, and the magazine, with all its fellow magazines, was shut off by this barrier from some of the best talent in the country. Drawing upon the limited surface of a block has always been regarded by artists as a cramped business; the freest handling is not attainable in that way. But from the moment SCRIBNER began to avail itself of the art of photographing pictures upon the wood, a great development took place, because that presented at once to the public the work of the best artists. The men who hitherto had been shut away from us could draw and paint their pictures, which could then be photographed upon the block; and the pictures themselves could all be preserved, so that as the engraver cut away his picture on the block, he had always the original before him, not only as a guide, but as an inspirer. Men drew, or painted, their designs with freedom, of any size, and often direct from nature, and the photograph, preserving this freedom and its results, reduced everything to its proper size. Now this is what Mr. Linton particularly despises, and on the engraving of these photographic pictures he expends a good deal of contemptuous English,—apparently forgetting, or not knowing, that Cole's engraving of Modjeska, which he praises, was done from a photograph on the block, and could not have been so well done in any other way.

Now we go a step further. It was found that when the pictures were photographed upon the block, we had secured entirely new effects. One picture would be drawn in charcoal; another in crayon, another would be produced by washes, another would be painted in black and white. Here was an opportunity for new effects in engraving. It was impossible, for instance, to reproduce the effect of a charcoal drawing by what Mr. Linton regards as legitimate line engraving. Such an engraving would utterly disguise such a drawing, and spoil it. In the reproduction, so far as the graver could do it, of these original designs by the best American artists, has lived the charm of the engravings of SCRIBNER'S MAGAZINE, which has made it unprecedentedly prosperous at home and admired abroad. We have made mistakes, but everybody

makes mistakes who undertakes improvement. We have produced new and charming effects, and when we talk about "legitimate engraving," let us not ignore results, which legitimize everything, and stand as authority against all the old fogies and bigots in Christendom.

To illustrate what we mean by the reproduction of drawings, let the reader turn back to the February number of SCRIBNER for the present year. He will find on the first page of that number, illustrating "The Tile Club at Play," the reproduction of a drawing in pencil. Mr. Linton's line would utterly have spoiled the raciness and character of this drawing. By the time such a drawing had been Lintonized by a graver there would have been none of its true character left. Or, take the drawing on page 472, in the same article. This was drawn with charcoal, and photographed upon the block. It is an exquisite piece of engraving, and a picture which has excited universal admiration, but it has hardly a "legitimate line" in it. It is what the editor of "The Atlantic" in his own columns calls "bad and false" art, yet we presume our readers (who have no end to push except getting at the truth) will see that it is fresh and attractive, and does exactly what it pretends to do—it reproduces a charcoal drawing and does not lie about it, as a man who engraves in Mr. Linton's "legitimate" way would be obliged to do. Take the picture on the opposite page, photographed upon the block from a clay model. That tells the simple truth, as it is in clay. There is another charcoal drawing on page 476, worth looking at. Then, on page 468, there is a picture of Swain Gifford's in which the attempt is made to reproduce the effect of a work mostly done in washes. For another notable reproduction of the effect of a modeled clay surface, see page 465.

Now, to drop all these effects, whose charm of freshness and variety has made the popular magazine the household treasure of a nation awaking to the sense of art, is to throw away, at the bidding of a man from whom the age has absolutely run away, all the progress that has been made during the last ten years. The editor of "The Atlantic," in a notice of the new illustrated edition of Longfellow's poems, says: "All but two of the pictures here are executed in pure line, and we learn that throughout the edition none others will be done in the manner reprobated on another page of this magazine by Mr. Linton * * *." He proceeds further to speak of the others as "the bad and false school." We greatly regret, for Mr. Longfellow's and the country's sake, that he and we are to be treated to the same monotony of consecrated commonplace which prevails in the old books of engravings, and in the recent "Flood of Years." We are sorry that Mr. Anthony clings to the conservatives, and has bound himself to so hopelessly bigoted a leader. He has made a mistake for himself and his employers, which they will not be slow to discover to his disadvantage.

It is the deepest condemnation of Mr. Linton's system of engraving, and at the same time a fair index of its character, that it entirely ignores all originality

of style. With this in mind, it is not surprising that his "Atlantic" paper contains no word of praise for the exquisite work that has been done by Mr. Henry Marsh; indeed, not even the slightest mention of what can fairly be called the greatest single engraving enterprise in the world.—Mr. Marsh's wood-cuts in Harris's "Insects Injurious to Vegetation," examples of which we are fortunately able to present in this and the following number.

Mr. Kiddie's Book.

FOR every man interested in the question of immortality, we have the profoundest sympathy. It is a question which has an intense, abiding interest for every thoughtful mind. At this time, particularly, when the immortality of the soul is questioned more sharply than it has ever been before in the history of Christianity, the precious faith of the churches has to be fought for with all the weapons that can be laid hold of. From the fact that there is really no evidence of immortality except the resurrection of Christ himself, and his declarations, many minds have reached about them on every side for everything that offers help. In the desire to know something positively about the matter, modern spiritualism had its birth and has held its life. It promised to do just the thing that millions of minds desired to have done; so that when it assumed to demonstrate the existence of life after death, it had a tremendous audience in readiness for it. The marvel is that there was a man or woman living who was unwilling to hear what it and its promulgators had to say. That it has millions of believers and followers to-day, is, probably, due less to its real, inherent strength, than to the greedy want which it assumes to satisfy,—a want so greedy that it accepts as fact that which only has its lying semblance.

We are not among those who regard what are claimed to be the facts of spiritualism as improbable *a priori*. No man can read the Bible carefully without being educated in a belief in spiritualism. In both the Old and the New Testament we have multiplied records of the communications of spiritual existences, with men and women in the flesh. The doctrine of demoniacal possession is taught with great distinctness. The ministry of angels, the return to the earth of those long dead, familiar intercourse with Christ after his resurrection, all are in the line of phenomena claimed as genuine by modern spiritualists; so that it is not strange that Christian men and women should find themselves educated by the Bible itself into a sort of readiness to receive spiritualism. It is, or would seem to be, easy for a Christian to believe that visitants from the unseen world are about him influencing his mind, and endeavoring to make themselves known. That is precisely what they used to do in the olden time. Why should they not do it now as well as they did it then?

So we are not among those who think it strange that Mr. Kiddie, a thoughtful, Christian man, should give heed to what claimed to be a revelation from the unseen world. We know something of this man, whose book has attracted so much atten-

tion not so much on its own account as on his. If we had been called upon to select out of the intelligent men of New York the hardest-headed, keenest-minded possessor of common sense, we very likely should have put our hand upon the shoulder of Henry Kiddle. He has occupied, we believe, for fifteen years the position of superintendent of public schools of the city of New York. He has done this with great acceptance through all administrations, showing enormous tact, decision and skill, and maintaining a most honorable name and fame. None but a first-class man could possibly do for the city and himself what he has done. When, therefore, it was announced that this man had not only become a devoted convert to Spiritualism, but had written and would publish a book upon the subject, it excited great astonishment, and awakened no little curiosity.

Well, the book has come, and, we may say, gone. It is a pitiful disappointment to all who expected anything of importance, basing their expectation on Mr. Kiddle's character for sound judgment and common sense. There is not one sentence in it, from beginning to end, to indicate a heavenly origin, but everything to show that it is the offspring of a very commonplace and immature mind. The literary quality of the book is simply and irredeemably wretched. There is not a page of it, not written by Mr. Kiddle himself, that would pass muster in a magazine office. Prince Albert, Jim Fisk, St. Paul, Queen Elizabeth, Henry J. Raymond, William Cullen Bryant, Edgar A. Poe, Shelley, Wm. M. Tweed, Pio Nino, Archbishop Hughes, Theodore Parker, Moses, Pontius Pilate,—all write exactly alike; all utter the same "hifalutin" pious slang, in the same wretched literary style. Byron condescends to "drop into poetry," and such poetry! Now the marvel to us is that such a man as Mr. Kiddle could fail to see that it would be quite impossible for Byron to write such doggerel as he is made responsible for in this book. How he can publish it without expecting to be hooted at and hooted down, we cannot comprehend. Why, it bears no more resemblance to Byron's style than a boot-black's jew's-harp bears to Wilhelmj's violin! It is simply impossible bosh, and Mr. Kiddle ought to know it. Nay, he does know it, and knowing it, how can he risk a good reputation in publishing it? It is true that other utterances attributed to other writers are just as absurd, but this happens to be in a form of art which is absolutely determinative. Byron simply could not have written these lines, and every literary man in the world knows it. Well, if Byron did not write these lines, what warrant has Mr. Kiddle that he has had communication with any other spirit whom he puts forward as the authors of these silly utterances? If one pillar in his cobble-house falls, the whole structure goes down.

Our opinion is that every one of these communications originated in the minds of Mr. Kiddle's children, who have acted as mediums. The children of the superintendent of the public schools ought to write better English, but the stuff they have uttered

must have come from young minds filled with certain religious ideas, and certain very crude ideas of heaven. We do not mean to say that they have been conscious of originating these communications, for many of the developments of trance and semi-trance show that this kind of work can be done without conscious effort. Certainly, if the work was done by a spirit, the spirit is an unconscionable liar, and is not to be believed for a moment. A spirit that would put into the mouth of Shakspeare such stuff as he is made to utter, is not only a prodigious liar, but a practical joker of the most cruel character. Why, Mr. Kiddle, did not Shakspeare answer the question when he was asked what he considered to be his purest play? Simply because the medium had no opinion on the subject, lacking the requisite knowledge.

College Instruction.

ONE would suppose that, after the discussions of educational processes with which the platform and the press have teemed during the last two decades, professional educators would be thoroughly furnished with sound ideas and excellent methods. At least, the college, which assumes the highest place among educational institutions, should present a system of instruction above reproach; yet it seems to us that the college is particularly lame in its methods, and unsatisfactory in its results. Nothing, for instance, can be more mechanical and unsatisfactory than the system of marking, as it is pursued, say, during the first year of college life. In the first place, the class is put almost entirely in the hands of young and comparatively inexperienced instructors. At a time when the pupil needs direction and inspiration, if he ever does, he is left almost entirely to himself, or to those whose experiences of life are so limited that they are not accepted as directors, and whose lack of character framed upon experience forbids the exercise of influence. The average tutor is very rarely an instructor. The pupil's business is to acquire from books the power to answer questions, and the tutor's business is to ask the questions and mark the results to the pupil in his answers. Automata could probably be built to do the work of the tutor, in all essential particulars, and in such a case the result to the pupil would be much the same that it is now,—a wretched grind, in which the chief interest attaches rather to the marks than to the studies.

Now if the power to answer questions is the chief end of man, or the chief end of education; if marks can be made, or are ever used, to measure manhood, or power to reason or to do, the present system is much nearer right than we suppose it to be. But the truth is that marks tell nothing about a student, except about his power to acquire from a book, and his power to recite glibly what he has acquired. For it must be remembered that many a young man has not the power to recite in a classroom, in the presence of his mates, what he has faithfully learned, and is thus made to suffer in

his marks, and, consequently, in his standing, for a fault of temperament for which he is not responsible. The matter of teaching is, as a rule, left out of the tutor's functions. His business is to hear recitations, in studies in which he gives neither direction nor assistance. He is a marker; that is his special business. If "no boy ever loved the man who taught him Latin," whose fault would it be likely to be? The truth is that when the tasks of college are irksome and hateful it is the teacher's fault, as a rule; for it is within the power of any competent teacher to make any study delightful. When students are properly introduced to an author, or a study, and are really directed or led by a sympathetic and competent mind, they are happy in their work, and it is the universal testimony of students that the young tutor is the hard man of the college. They much prefer to be in the hands of the older men. They are treated more like men by the elder teachers, and less like machines. They prefer to be in the hands of men who seem interested to find out what they know, and careless to learn what they don't know, and to trip them upon opportunity.

It seems to us that a great deal too much of college work is put upon young men, who may be very acute and very learned, but not very wise; and that the system of marking, as at present pursued, is very poorly calculated to nourish the self-respect of the young men subjected to it. It also forces into prominence a motive of study which is anything but the best. The great business of the student is, not to acquire knowledge and discipline and power, but to get marks. This motive is absolutely forced upon him, and it is a mean and childish one, and he knows and feels it too, very much at the expense of his self-respect. His standing in his class, the reports of his position to his parents, even his power to stay in the college at all, depend upon his marks. Marks are the ghosts that haunt him by night and the phantoms that track him by day. Now he knows, and everybody knows, that men cannot be ticked off justly in this way, and he may know that he is ten times the man that another student is who may win better marks, through his facility in committing to memory, and reciting off-hand. We have said that the motive forced upon him is a childish one. We know many students who feel this keenly, and who believe with us that if students were treated more like men by professors interested in them and in their progress, any apparent need for treating them like children, that may at present exist, would pass away.

We have said also that the student's power to stay in college at all depends upon his marks. This is the most astounding thing connected with this whole matter. The only remedy that seems to have been devised for the treatment of a slow student, by these great public educational institutions whose real business is to educate him, is to drop him; and to drop him is, nine times in ten, to discourage him and ruin him. Can anything more lame and impotent in the way of a conclusion be imagined? The result is absolutely rascally and criminal. It is a natural outcome, however, of the mechanical system which we regard as essentially vicious. The college seems to be regarded by its faculty as a great mill, into which the boys are turned as a grist. Everything that will not go through the hopper is thrown away, no matter what personal powers and aspirations, or what family hopes may go with it.

Of course we understand the conveniences of the marking system. It throws the responsibility of the student's progress upon himself, and entirely relieves the faculty. That is a very great convenience—to the faculty,—but as the college is paid for educating him, it is hardly fair to the student himself, or his family. Then it is so much easier to judge a man by his power to recite a lesson than it is by his power to solve an intellectual problem, or do an intellectual piece of work of any kind! Then, still again, it is a kind of work that can be trusted to young men, who have just gone through the process and are accustomed to the machinery,—indeed, are products of it!

Gentlemen of the college, is there not some better way—a way that will make more and harder work for you, perhaps, but a way that will more thoroughly nourish the sense of manhood among your students, and give them a nobler motive for work than that which you force them to regard as the principal motive,—a nobler motive which will make study a joy, and invest them with a feeling of dignity and a sentiment of self-respect? To treat students like gentlemen, and less like children or machines, and to come more into contact with them as guides and teachers, and less as task-masters, would, in our opinion, make better students out of them and exceedingly better men. We cannot doubt, we may say, in closing, that too much college work is given to young men to do. Their work is drudgery, perhaps, which the older men would gladly escape, but no work done in college should be drudgery, if pursued with the right spirit and policy, and with adequate intelligence.

COMMUNICATIONS.

A Woman's Thoughts upon the Education of Women.

EDITOR OF SCRIBNER'S MAGAZINE.

DEAR SIR: As representatives of this wonderful century we are perpetually congratulating ourselves—in Pharisee fashion—upon our superiority. We find ourselves looking back upon the past of our grandmothers with a compassion not untouched by scorn. It is not so much that we are holier than they; for holiness is, perhaps, just a trifle old-fashioned; but that we are so much wiser!

Our civilization has, indeed, carried us forward with gigantic strides in material things; we have thousands of comforts, and luxuries, and even advantages undreamed of by our grandmothers; but the stern question which circumstances, now and again, put to us is not merely: What do we possess? But rather: What are all these vast advantages making of us—individually and collectively? In the rush and struggle to *have*, are we not often losing sight of the old-fashioned virtue which resides in *being*?

The most favorable conditions are not always, nor even generally, the softest. That physical regimen which develops the largest normal amount of *threw* and *sinew*; which produces the soundest physique and the steadiest nerves, is the best. In just the same way it is neither the large amount, nor the delicate quality of our mental nutriment which is going to make of us a race of intellectual giants.

The education of boys and young men is undoubtedly less one-sided and narrowing now, than it was a hundred years ago. The introduction, into school and college courses, of the physical and natural sciences, has, to a certain extent, displaced the classics. However essential a classical education may be, both because of the information and the discipline which it affords, the almost exclusive pursuit of such studies is undoubtedly stultifying. There has been a great multiplication of studies even in boys' schools, it is true; but there is about a properly constituted boy a healthy animalism which enables him to resist the forcing process so unmercifully used by the educators of the present day.

With girls, the case is very different. The system bears more heavily, and the power of resistance is less. A girl, with a slighter muscular development, a more delicate nervous organization, is expected in four years to cover very nearly the same ground which is gone over by a boy in eight. The textbooks, it is true, are not so difficult, and the course is less advanced; but when girls' "accomplishments" are counted in, the *number of subjects* is about the same.

The consequence of all this is that a girl's study is far more superficial. Few teachers of experience will deny that while a bright girl will work harder

and recite better than a boy of the same intelligence, the boy is far less easily satisfied with a mechanical way of learning.

A lady who had had much experience in teaching both boys and girls, speaking of the extraordinary obtuseness of a certain pupil, said:

"In a physiology class, this young lady of fifteen inquired with languid surprise, 'Is there not a straight passage through the head from one ear to the other?'—a somewhat natural conclusion," the teacher commented dryly, "if she had ever watched the processes of her own mind."

"Which would you prefer teaching," asked a visitor,—"*boys or girls*?"

"Boys, infinitely," was the prompt reply. "No boy, for instance, would ever have asked such a question as *that*. He would long before have investigated the subject with a lead-pencil. Not, probably, in his own ears," she added meditatively, "but in his younger brother's."

The education of a girl is supposed to be finished when she is about eighteen. This makes it necessary that the heaviest pressure shall be brought to bear upon her just when she is growing most rapidly, and when her physical system requires the most favorable conditions. The dangers of this high-pressure method do not lie so much in overstimulation of the brain, as in physical and nervous depression, with an abnormal distension of the memory, at the expense of the thinking powers.

If the public mind could once be dispossessed of the stupid notion that education is a mere filling of the mind with facts and theories, and return to the noble old Greek idea of the gymnasium, there would be some hope of a radical reform. With boys this old notion is necessarily retained in a modified form: a boy is making ready for the battle of life. Whatever he learns either directly bears upon his chosen calling, or else indirectly by developing him and making a man of him so that he may be strong at all points. But school, as affording a course of "training" for a girl, is an idea almost ludicrous. Girls go to school, not to be developed into reasonable thinking beings, but to have a certain amount of information imparted to them, or, rather, "crammed" into them.

The most vigorous mind can assimilate only a limited amount of mental nutriment in a given time. When too large a quantity is forced into the mind, the effect is analogous to that of overeating. The powers are overtaxed, and even the normal amount of nourishment is not healthfully and comfortably appropriated.

As a matter of fact, do not our girls "go through" all the sciences, and some of the arts; in their last three or four years at school do not they study literature, rhetoric, logic, and political economy; natural, mental, and moral philosophy; physiology, chemistry, botany, geology, and astronomy; geometry, algebra, and perhaps the trigonometries; and

with this one or two languages, and at least one accomplishment? And yet, three years after she has left school, who ever expects from an ordinary young woman a sane opinion upon any subject connected with any of these topics? The enormous mass has either never been taken in at all, or else it has been somehow gotten rid of, and the mind is in a state of collapse. Some women do survive the course, and come out with their thinking powers not quite destroyed; but that is due to an exceptional vigor of mental constitution, and in spite of their teaching, rather than because of it.

The fact that the majority of women teachers teach simply because they must do something, and can do nothing else so "lady-like," is left out of the account. The system, even with good honest teaching, is a process of stultification. It ignores every law of growth and development; it is founded on a false notion of the nature and end of education; and thus is working toward a mistaken end by unwisely chosen means. These strictures apply to the ordinary private school system. Public schools, looking toward some practical application of what is taught, attempt less, and do what they attempt more thoroughly.

The dissatisfaction with this superficial cramming, which has been growing stronger for several years past, is now beginning to take a practical and positive form. Many a woman who looks with utter disgust upon the clamorous crowd, demanding the right of suffrage, cherishes quietly in her heart a firm conviction that she does possess an inalienable and God-given right to grow into the fullest stature of her intellectual womanhood. While the clamorers are clamoring on, she has fulfilled the simple condition of deserving the regard, and so has won it: Harvard has opened her gates and admitted women to her instruction, if not to her honors.

The movement was a quiet one, and originated outside the circle of college instructors.

When the Cambridge professors were approached in reference to the subject, the response was so cordial that many of them offered instruction without charges rather than permit the experiment to fail. The tuition being private, this generous offer was, of course, declined. Nothing has been asked of the university as a corporation, but by the cordial kindness of the professors, some forty of the university courses will be open to girls at the beginning of the next collegiate year. Women who desire to devote several additional years to study, and who pass examinations equivalent to those of the male student, may now take either the four years college course, or special "University" courses, as they may elect. The conditions of admission are very nearly the same, the standard of scholarship being equal, and the expense rather less to a girl. This is not a new experiment, and has none of the objections belonging to a mixed education. Conservative England has taken the lead in this matter, in Girton College, Cambridge; but Harvard possesses some advantages over her older English sister; the expenses of the women's course here are less, and the instruction is more generally given by the full professors.

It is however probable that for many years to come superficial self-sufficiency will be the rule, and good, sound, modest common sense and education the exception. Editors perhaps enjoy peculiar advantages for observation in this field, since every woman in the United States, it would seem, before she settles down to anything else, tries once to write for a magazine. That ignorance which is respectable, or even lovable when veiled by sweet womanly graces and the gentle offices of home, becomes hideous when it casts off its womanhood and undertakes to be didactic, or witty, or pathetic, in silly platitudes, bad grammar and worse spelling.

Mrs. Browning, in "Aurora Leigh," gives the following greeting to a new authoress, by the opposite sex. She makes them say:

"Oh excellent!
What grace! What facile turns! What fluent sweeps!
What delicate discernment, almost thought.
The book does honor to the sex, we hold.
Among our female authors we make room
For this fair writer, and congratulate
The country that produces in these times
Such women competent to—spell!"

The point of this sarcasm would, however, be lost on many of the would-be women writers of the present day; even this "competence," which their grandmothers possessed, being lacking.

S. B. H.

"The New Museum in Rome."

A CORRECTION.

277 CLARENDON ST.
BOSTON, MASS., May 2, '79.

ED. SCRIBNER'S MAGAZINE.

DEAR SIR: I notice that an error has crept into the title of one of the illustrations of the interesting and valuable article in the May SCRIBNER on "The New Museum in Rome." As this is the first attempt, so far as I am aware, to popularize knowledge of the important art discoveries that have recently been made at Rome, any misinterpretation of their meaning seems worth correcting. The charming little statue of "Love Disguised with the Attributes of Hercules" is misrepresented under the appellation of "Commodus as the Infant Hercules." This doubtless has arisen from the fact that there are in the New Museum two busts of Commodus, discovered on the same spot and on successive days, and both remarkable for their wonderful execution. One of them represents him with the attributes of Hercules, and of this an engraving is given; while the other is that of a youth of some eighteen years of age; both of them are referred to in the article. But the title of "The Infant Hercules," given to the statuette in question by the official catalogue of the museum, is also incorrect; though it is described under this designation in an article by Cav. C. L. Visconti in the first number of the "Bullettino della Commissione Archeologica Municipale di Roma." That name ought to be confined to actual representations of the hero in his infancy, like the singular and extravagant example in touchstone in the Capitoline Museum at Rome; or those in which the baby is represented in the act of strangling the serpents sent to destroy him. The graceful statuette in question is simply the most charming specimen that has come down to us of the numerous parodies of celebrated originals, in which the "later plastic" art of the ancients delighted, and about which the Greek Anthology furnishes us much information. The famous "Hercules in Repose" of Lysippus is well known to us from the copy of it by Glykon, of Athens, now in the Naples Museum, where it goes by the name of the "Farnese Hercules." If we place photographs of the two statues side by side, the intention of the parody is very evident. There are slight differences in the treatment of the original; the head is bare, and the apples of the Hesperides are held in the right hand, which rests upon the hip. Statuettes in the Louvre, however, resembling the present one, hold the apples in the right hand, instead of the left; and one of them has the head bare, while others have it muffled in the lion-skin, and smiling in the same arch fashion as this one. This is also the method of treatment of the one in the Vienna Museum, which of all that I have seen most nearly approaches this in gracefulness and *nobilit  *. Welcker has suggested that this latter may possibly represent the infant Hermes, who has

stolen the club of Hercules. In the Capitoline Museum there is still another, like the present in all respects, but of very inferior execution. The occurrence of so many of these statuette, so nearly resembling one another, certainly suggests the existence of some celebrated original, of which, so far as I know, we have no other knowledge. Such a statue would be a natural companion-piece to the "Hercules bowed down by the might of love and despoiled of his weapons," which is alluded to in an epigram in the Greek Anthology, and which has been preserved for us in gems. The present statuette is also interesting as representing, in addition to the club, another of the attributes of Hercules, which is not very common in statues, the bow together with its case. "Love playing with the arms of Hercules" has been a favorite subject for ancient comic art.

Sometimes he bears upon his shoulders the massive club, which bends him down beneath its weight, and a lamp at Naples with this design has the inscription "Help, comrades!" More common still are representations of "Love bending the bow of Hercules," of which numerous examples occur, that have been made the subject of a special study by Friederichs. The combination, however, of the two attributes is, I think, unique, and seems to militate against Welcker's interpretation of the lovely statuette at Vicenza.

Hoping the intrinsic excellence of this new art gem may warrant this long note, which seeks to secure for it the rightful appellation of "Love Disguised with the Attributes of Hercules,"

I remain, very truly yours,

HENRY W. HAYNES.

HOME AND SOCIETY.

Decoration of the Dinner-table.

It is quite impossible for the average female mind to confront unmoved the delightful possibilities to-day afforded by the service of a dinner-table. Times have changed since the mistress of a household thought it necessary to set before her guests a feast like the day-dream of Ichabod Crane, where "the pigeons were snugly put to bed in a comfortable pie, and tucked in with a coverlet of crust; the geese swimming in their own gravy, and the ducks pairing cozily in dishes, like snug married couples, with a decent competency of onion sauce." The now universal *dîner à la Russe*, with its airy hints, suggestions, and innuendoes of ministry to the coarser needs of human nature, has limited each course to the one dish offered at a time, with its companion sauce or vegetable.

"Giving a dinner-party" in the Virginia days gone by, for instance, meant a good deal of hard work for the housewife and her coadjutors, generally the daughters or sisters of the family; it meant hours of seclusion in a light pantry, with curls tucked up, and ribbons obscured by a gingham apron, weighing, measuring, egg-beating, almond-blanching, icing, garnishing, seasoning, tasting and gossiping!—all this, and much more, till the lavish banquet "stood confest" before the eyes of twenty hungry guests, who had jolted over ten miles of unspeakably bad roads to be punctual to the hour of half-past two P. M.

The march of civilization and modern degeneracy have materially lessened the labors of dinner-giving in the present. As a mere matter of contrast, it might be well to picture the dame-chatelaine of latter days, who, after having bidden her guests and consulted with her cook, abandons all concern until an hour before the coming of the guests. Then may you see a sylph, in trailing-Watteau gown of palest blue, with saucy little bows, glide into her dining-room and hover round the board. The absolute work of arranging cloth, silver, crystal and steel, has been done by a well-trained servant; but there are graceful last touches which no hand but hers may give. There are wreaths of smilax to be trailed over piles of rosy fruit, and flowers to be grouped in studied carelessness beside each plate. Dinner-cards, and the mighty question of places, must be

settled now; bon-bons, little cakes, and crystallized fruits must be arranged. Lamps and candles must be passed in review, the temperature of the room regulated, screens set, and portières drawn for the comfort of the company. A word of admonition is to be given to the servant about the warmth of the soup and the chill of the oysters before the mistress vanishes into her dressing-room, soon to re-appear and take her place, watchful, gracious, yet unconscious, as hostess of the feast!

The somewhat rigid forms of Eastlake's Jacobean-table are common now, despite the remonstrance of old dinner-givers, who say that there is no shape so comfortable, so sociable, or so effective as the perfect round.

Until recently, table-cloths have been restricted to an ornament arising merely from the gloss obtained by various distributions of the warp and woof in weaving. The specimens of British and Saxony table-damask are almost satin-like in texture. From Dresden has lately come a table-cloth quite new in conception, representing a dance of cupids amid garlands of flowers, encircling the center-piece. But the profulent tide of color has invaded even this stainless snow. In Germany, in 1872, some table-cloths were made, imitating the Renaissance linen, and bearing a familiar design of the Royal Meissen china—the "Zwiebelmuster" or "onion-pattern" in colored borders. Since then, scarlet and blue re-appear in monogram and crest, and in other traceries wrought by hand upon the damask.

We use Macramé lace under the fond impression that it is "something new," but the drapery of the table in Paul Veronese's picture of "Jesus in Simon's House" has identically this trimming, and in one or two other old paintings the table-cloth is bordered with the cut-work we are all learning to make to-day. I have seen a side-board cover, table-cloth, and napkins, decorated to match, with broiery of scarlet, and a handful of scarlet poppies dropped upon one side, with interwoven texts wrought in German characters.

Variety, thus laid upon the foundation stones of your dinner-table, appears throughout. The changes of plates are kaleidoscopic. You take your soup in Sèvres, your entrées in England, and so on, till you come to fruit and coffee in China or Japan. It is quite *en règle* to turn your plate over, with the

sapient air of a connoisseur, and study the marks thereon inscribed. But it is well to avoid the catastrophe which befell an absent-minded man, not long ago, who, forgetful that he had just helped himself, reversed his plate and bestowed one of Delmonico's *bouchées à la reine* upon his neighbor's satin petticoat.

The use of heavy silver pieces has been very generally superseded by exquisite bits of porcelain or glass, bearing tribute of fruit and flowers. This is in reality an economy, as well as a pretty fashion, for a lady may select from her cabinet or shelf a Venice glass, an iridescent vase or two, and group her own flowers, without resorting to the costly structures sent in by her florist. A new fancy is to use but one kind of flower upon the table, as for instance, Jacqueminot, Maréchal Neil, or Gloire de Paris roses. For bouquets offered at each plate, there are lovely horn-shaped holders in Italian straw, flat baskets to hang with ribbons to the waist, and horse-shoes to be made of violets, and used in similar fashion.

One phase of the dessert at a recent dinner may prove suggestive, especially as the general effect resulted more from an harmonious assembling of colors than from a lavish display of wealth. The centerpiece was a glowing pyramid of scarlet poinsettia leaves, and white camellias, cut with long stems, and having glossy dark-green foliage. The shell-shaped dessert dishes, finger-bowls, and ice-cream plates, were all of ruby Bohemian glass. The doyleys were etched with red silk, in tiny Japanese designs. The candelabra used were of clear crystal, the *bobèches* of ruby glass, and the red wax candles had each one a little jaunty cap, or shade, of scarlet silk. The sparkle of fire-light and candle-light over all recalled the impression produced upon Jane Eyre by the drawing-room of Thornfield—"a general blending of snow and fire."

It ought to be quite a consolation to our country friends who have so long been sighing for the luxury of gas, that candles again play a prominent part in decoration. Sideboard, mantel-shelf and wall sconces glow with a subdued luster. Then the French moderator, or the familiar student's lamp, burning soft under a shade of antique lace, lined with crimson silk, makes so becoming a *chiaro-oscuro*, that it is doubtful whether they will ever be allowed to go out of vogue again.

Among dinner-table adornments, I know of nothing more beautiful and seductive to the housekeeper than the modern glass, now imported in quantities, and at prices within the reach of a moderate purse. What variety of form and tint in the Salvati or modern Venice glass! Amber, topaz, opal, sea blue, ruby, and bottle-green, make a beautiful radiance on a snowy cloth. In the Bombay striped glass, introduced into England by the Prince of Wales, after his visit to India, and since largely reproduced, there are beautiful specimens of fruit-dishes, flower-vases, and ice-cream plates. Bohemian and English enameled glass appear in such beautiful guise that it seems impossible for them to be excelled; and the ware from the Stourbridge

factory is a revelation of the refined art attained by skilled engravers upon crystal.

SACHARISSA.

The Boys of the Family. IV.

A MILITARY EDUCATION AT WEST POINT.

THERE are probably few parents who, in discussing what they may do with their boys, give much consideration to West Point, unless some other member of the family is, or has been, in the army; yet here is an opening for a spirited lad of intelligence to a profession, which, if it can never yield riches, at least belongs to gentlemen and leads to honor. It has some manifest advantages over other occupations; a moderate income is insured to its members for life, and a definite social status. Entering the church, or the professions of law or medicine, a youth needs such a university education as can only be acquired by large expenditures of time and money; the preparatory period is one of continuous outlay; while in entering the army as a cadet at West Point, he is provided with an education of a higher standard than that attainable in most colleges, and is paid a liberal salary during the course. He needs no more capital than his railway fare to the Academy; no other equipment than the few inexpensive articles hereinafter specified, and when he is graduated and is enlisted as a second lieutenant, an amount is paid to him sufficient to purchase the new outfit necessary. Instead of being aristocratic or in any degree exclusive, the Academy is open to all, regardless of birth or station, who are capable of passing its preliminary examinations, and the poorest boy may avail himself of the same education given to the richest without ever perceiving or being reminded of any difference in the eyes of the officials between himself and them.

The two essential things in successful candidates are robust physical health and a taste for mathematics. In awarding marks the greatest weight is given to mathematics—the maximum being three hundred; three hundred is also the maximum for natural and experimental philosophy and civil and military engineering; one hundred and fifty for law; one hundred for drawing; one hundred for French, and two hundred for discipline. From these estimates it is evident what abilities are most acceptable to the authorities. Without cleverness in mathematics, without self-control and subordination, a boy stands little chance of being graduated or being long continued on the rolls; unless he is physically strong, the somewhat Spartan manner of life would soon compel his retirement.

Each Congressional district and territory—also the District of Columbia—is entitled to have a cadet at the Academy on an appointment made by the Secretary of War, in accordance with the nomination made by the representative or delegate. Ten other appointments are conferred at large by the President of the United States. The appointees are usually selected by the Congressman of the district in which a vacancy occurs, at a competitive examination, announced in local newspapers; they must be not younger than seventeen nor older than twenty-two;

unmarried, not less than five feet in height, and clear of all deformity, disease and infirmity. They are required to report at West Point on the 1st of June, and are quartered there free of expense, apart from the cadets, until they are examined by the Academic Board, upon which body their final acceptance or rejection depends.

In the branches which it covers, the examination is exacting, but it does not include anything that an average boy of sixteen ought not to have learned in the public schools. A candidate must be able to read and write the English language correctly, and to be familiar with the four ground rules of arithmetic, with reduction, simple and compound proportion, and vulgar and decimal fractions; he must also have a knowledge of the elements of English grammar, descriptive geography and the history of the United States. No deficiencies or imperfections in these subjects are tolerated, as it is felt that the requirements for admission are too simple, and that they should include algebra and geometry. By the 20th of June the candidate is informed whether he is accepted or not; if accepted, he engages to serve in the army of the United States for eight years, four of which are to be spent at the Academy. During this latter period he receives a salary of five hundred and forty dollars a year. The salary is sufficient to cover all his expenses, including mess bills and clothing, and to leave him at the end of the academic course with money enough for the purchase of a lieutenant's outfit, although a hundred dollars from home in addition is never likely to be inconvenient or superfluous. If necessary, the outfit he requires on his entrance will be issued to him and charged against his pay, as all books, uniforms, etc., will be charged subsequently; but it is expected that he will defray the original outlay in advance. He must also bring with him the following articles: seven shirts, six pairs of winter socks, six pairs of summer socks, four pairs of summer drawers, three pairs of winter drawers, six handkerchiefs, six towels, one clothes-brush, one hair-brush, one tooth-brush, one comb, four sheets, and one trunk. The salary is only sufficient, provided economy is exercised. If the cadet is careless of his underwear or clothing; if he incurs fines for misusing the library or for other delinquencies; or if he is extravagant with his pocket-money, the annual amount paid to him may prove inadequate.

At West Point, as at Annapolis, every measure possible is taken to prevent other distinctions being drawn among cadets than those based on merit. The son of a millionaire is compelled to wear precisely the same kind of clothing, and to occupy precisely the same kind of a room, as the son of a clerk or mechanic. It occasionally happens that a cadet considers that the uniform trousers issued to him are not stylish in cut, or that the uniform cap does not sit jauntily upon his head, and obtains duplicates from some fashionable clothier in the city; but as soon as they are discovered, the smuggled articles are invariably confiscated. The rooms are furnished alike, and the occupants are not allowed to adorn or add to them in any way. If the furnish-

ing were left to the taste or discretion of the cadets, it is obvious that, when off duty, one might have a drawing-room and could entertain in easy chairs on Turkey carpets; while the other, who is struggling through the Academy with only his salary to support him, might have a cheerless den with a chair, a table, and a rush-light in it. But the cadet has no privilege which his fellows do not share, and though his parents may supply him with unlimited pocket-money, he is not given an opportunity to spend it. He is not allowed to visit a shop or to receive parcels from abroad without the consent of the superintendent; and the mess is a common one, to which no additions may be made by individuals. There are two cadets to each room; no carpets, no pictures on the walls, and not more than a dozen books. The occupants are required, when they are called at six o'clock in the morning, to roll up their bedding, to sweep the floor, to dust the furniture; and they are punished if they are found lying down on their beds before "taps," which is the signal to put out the lights at ten P.M. The discipline seems severe to a civilian, and a nervous or peevish boy could not endure it. Several offenses—such as intoxication, falsehood, libel, hazing, dueling and dishonesty—are punished by dismissal; others are punished by fines, confinement or the abridgment of leisure hours.

It should be understood that though a candidate has passed the examination by the Academic Board in June, he is ranked as a probationer until he has also passed the semi-annual examination during the following January, when if he is successful, a warrant is issued to him; the difficulties of success may be estimated from the fact that only thirty-five per cent of those who are appointed, and less than fifty per cent of those who are admitted, are graduated.

There is only one vacation during the course. From the end of the June examination till the end of August the cadets live in camp, and those who have been in the Academy two years are granted leave of absence for the weeks that intervene, provided that less than two hundred demerits are recorded against them. Those having two hundred and fifty demerits are detained two days; those having three hundred, eight days, and those having three hundred and fifty, twelve days. New-Year's, the Fourth of July, Thanksgiving and Christmas are observed as holidays, and, in cases of good behavior, a few days' leave of absence may be granted at Christmas. Friends or relatives may visit the Academy at any time, and permission to call upon them is given to the cadets, under certain restrictions.

After graduation, as before, the pay is small, and the promotion slow; in time of peace the prospect is by no means brilliant; the young officer may be ordered to some isolated frontier post in the far West and be kept there for several years,—it is probable that he will be; but if the principles instilled under the code martial at West Point have not been lost upon him, he will have, above any material advantages of his position, the satisfaction of having had the education and training of a gentleman.

WILLIAM H. RIDING.

Hints to Young Housekeepers.—VII.

TWO SERVANTS.

In those households where but two servants are kept, one should do the cooking, washing and ironing, and keep the lower part of the house in order, and the other should be housemaid and waitress. Where the family is small, the work is not too much for two servants; where the family is large, care should be taken by the different members not to increase the work unnecessarily, and there should be a willingness to aid in keeping things in order. We live in New York, as it were, in towers, with stairs upon stairs. To those who go up and down only to their meals, to dress, and to go to bed, this mode of life is but a light affair; but to servants, who must answer the door-bell, run with letters and messages, and go up and down for their necessary work, it is often a cause of much distress. A considerate mistress will save them as much of this climbing as possible, by giving notice that she will or will not receive visitors, and by having a box in the hall, in which notes and letters may be deposited which do not require an immediate answer, and by giving such clear directions in the morning that no running to ask questions is necessary.

ONE SERVANT.

WHERE but one servant is kept, the arrangements must be very systematic, or there will be confusion. A maid-of-all-work must begin her day by opening the windows of all the lower part of the house to air the rooms. She may then brush out the range, make the fire, sweep the kitchen, fill the kettle with fresh cold water, and then go to the dining-room, to put it in order. She proceeds like any housemaid (I need not repeat the duties), and, after sweeping and dusting, lays the breakfast-table, shuts the door of the room, sweeps the hall, shakes the mats, cleans the door and bell handles and the door-steps. (If the family breakfasts very early, the hall and door-steps must be left until after breakfast.) She should now wash her face and hands, smooth her hair, put on a clean apron and collar, and be ready to take the kettle or urn to the table. While the tea is drawing, she must prepare the breakfast and serve it. She can then take her own breakfast.

While the family is at breakfast, the maid should go upstairs, empty the tubs, put the rooms in order and leave them to air. (The beds should be made and the rooms dusted by members of the family. They may have the satisfaction, in this way, of having a well-made and attractive-looking bed.) The servant should then take from the breakfast-table the meat dishes and plates, place a vessel of fresh hot water on a tray upon the breakfast-table, so that the mistress can wash the china, silver, and glass herself, and attend to castors and salt-cellar, brush up the crumbs, fold the table-cloth, and restore the room to order. A pair of gloves and a large apron, in which to perform these services, should be kept at hand. The maid should sweep down the stairs, and dust the hall and balusters. After these duties are performed, the mistress should go down-stairs and give

her directions for the day, and give out from her store-room whatever supplies are needed. It would be well for the mistress to dust the drawing-room, especially the books and bric-à-brac, for the hands of a maid-of-all-work are not always in condition.

As soon after breakfast as possible, the maid, to avoid confusion and haste, should see that every thing is ready for dinner; she can then go to her washing or ironing. No maid-of-all-work can do all the washing of a family (unless it be a very small one) where tasteful order is preserved. A woman on Monday to assist with the washing is a relief, and when the clothes are washed, dried and starched, she can find time during the week to do the ironing at intervals, if her employers are reasonable people.

When the dinner hour arrives, the maid must have her dinner ready, having first set the table, and unless the plainest dinner is to be served, the family must submit to having some dishes "kept hot" (the ruin of good cookery). The maid must change her dress, bring in the dinner, see that every one has bread and water, and then prepare the second course, if there is one. When the first course is over, she should return, clear the table and put on the dessert. After dinner, she should brush up the crumbs and the hearth and go and eat her own dinner.

After dinner is over, she should wash and put away the dinner service, arrange her kitchen and put on the kettle for tea (if the family take tea after dinner). She should take in the tea, go upstairs, turn down the beds, see that the tubs are set out, and the pails full, take down the tea-service, wash it, and carry up the silver.

The cleaning of the house should be divided so that each day shall have its proper share: the parlor and dining-room on one day, two bedrooms on another, and so on, that the regular daily work need not be crowded out of its routine.

At night, the servant should leave her kitchen so that nothing but the morning work is to be done, her wood and coal ready by the range, or stove, and should see that the doors are locked and bolted.

A household cannot be carried on with system and order with but one servant unless the mistress is energetic, reasonable and ready to do what is necessary. If washing is to be done, let it not be an excuse for every mistake or omission, but press it into its proper place and time.

When there is a child or children, the mother; if she cannot have more than one servant, must be nurse herself. The necessity is very delightful for the child, but it is very hard work for the mother.

NO SERVANT.

A FAMILY can live in New York without a servant. There will be, of course, some inconveniences, but anything is better than a struggle to do what one cannot afford, or to incur expenses which one is unable to meet. This plan can be carried out by taking a small apartment, and getting one's own breakfast and lunch—an object easily attained by having cold meat (which may be bought at any

restaurant), pressed beef, tongue or ham, with the addition of a boiled egg or an omelet, toast and tea or coffee. If there are children, rice, oatmeal, or hominy may be boiled in an earthen-ware saucepan, which is easily washed; baked apples, a very wholesome dish, are also readily cooked. The chief trouble is the fire. A gas stove can be used, by which anything may be cooked. It is also economical, as the gas can be put out as soon as used.

The dinner, or, indeed, all the meals, can be sent in from a restaurant, an agreement being made, either for so much for each person, or by the day or week. A woman can be brought in occasionally to clean the apartment. The washing, of course, must be put out. This is, in some respects, a most comfortable way of living, since it relieves a mistress of many responsibilities and doubtful expenses.

MRS. S. W. OAKLEY.

CULTURE AND PROGRESS.

Matthew Arnold on Equality.

THE leading essay in Mr. Arnold's latest book* is that upon "Equality." It was delivered in London as an evening lecture at the Royal Institution, which, by the way, is an extremely aristocratic place. It was reported in the "Daily Telegraph," a paper which has been the special object of Mr. Arnold's satire, under the heading, "Matt. Arnold Again." The heading was a witty one and had a good deal of meaning in it, since it expressed the somewhat puzzled and unsatisfied frame of mind with which even the more intelligent portion of the British public has been listening to Mr. Arnold for the last fifteen or twenty years. His thoughts have always amused and interested; there was no doubting the reality of his culture, the rectitude of his intentions, nor, as regards certain subjects, the clearness of his perceptions. His very satire was so good-humored and the motives that prompted it so plainly pure as not to offend even those against whom it was directed; but for all this the world has hitherto been at a loss just what value to put upon Mr. Arnold's contribution to the ideas of the day. Some of his thoughts are undoubtedly true, new, and important; others again look very much like crotchets. The world is only lately beginning to give him his proper and just position as one of the truest and most intrepid writers of the time.

The Royal Institution does not allow addresses on practical politics. Mr. Arnold, of course, had no practical measures to propose or advocate. Nevertheless, he said that the only way by which equality could be reached in England was by freedom of bequest. The code Napoleon which is in force in France, Holland, and Belgium, and which is substantially in force in Italy, leaves a man free to dispose by will of only a very small portion of his property. In France, he can only control the disposition after his death, if he have three children, of one-fourth; if he have two children, of one-third; and if he have one child, of one-half. In this country, freedom of bequest prevails just as in England; but

here nobody desires to leave his property to his eldest son. In this connection, Mr. Arnold says: "I remember hearing it said to an American in England: 'But, after all, you have the same freedom of bequest and inheritance as we have, and if a man to-morrow chose in your country to entail a great landed estate rigorously, what could you do?' 'Set aside the will on the ground of insanity,' answered the American."

But in England the wish to entail property is apparently as strong as ever. The transmission of great estates undivided can only be prevented in that country therefore by putting restrictions upon freedom of bequest. This nobody would dream of proposing at the present time. Mr. Arnold therefore says that his idea of the beneficence of equality is intended only for the "thoughts of those who think." He holds that the inequality at present existing in England is hurtful to all classes. To quote one of those expressions of his, which having once obtained, he never ceases to reiterate: "Inequality materializes the upper class, vulgarizes the middle class, and brutalizes the lower class." We think that everybody who knows England will agree that this is the truth. Speaking broadly, the upper classes care for little but to eat and drink, to shoot and hunt, to dine and dance, to be envied and admired, and to array themselves with all the splendid accidents of their position; the middle class are entranced in admiration of the "splendid materiality" of their superiors; the lower classes, seeing above them a level of living beyond their approach, sink hopelessly back upon such poor pleasures as their life is capable of, and yield themselves to "gin, beer and fun." With that fine gift for reading human consciousness which the author possesses, he lays his finger upon a fact of human nature which is really at the core of the whole matter, viz., that to be in a position greatly and unalterably inferior to another causes a feeling of unwholesome depression and discouragement. Again, we are told that equality and a high civilization are inseparable. Civilization consists in the pursuit by society of perfection, along, not one, but many lines. Man should seek to do rightly in the daily conduct of life, he should pursue a sense of beauty, he should seek knowledge and science, and he should seek to have good manners, and to be sociably happy. Social perfection is one

* *Mixed Essays*. By Matthew Arnold. New York: Macmillan & Co. (Including the Essays "Democracy," "Equality," "Irish Catholicism and British Liberalism," "Porro Unum Est Necessarium," "A Guide to English Literature," "Falkland," "A French Critic on Milton," "A French Critic on Goethe," and "George Sand.")

of the most important of these lines. France is more civilized than England, because at this point she is superior to England. And the social superiority of France is said to be due to French equality.

The essay on Democracy, which is the first in the volume, was published some twenty years ago in a work giving an account of the systems of education of the various countries of Europe. One turns with some interest to this essay to compare Mr. Arnold's present social opinions with those of a score of years ago. Some changes in the world's aspect have taken place in the meantime. France has become a republic, and this time really appears to mean to stay one. This, no doubt, has influenced English opinion. But England is after all very much in the dark about the country which is only an hour and a half distant from her shores, and which, on a clear day, may be seen from the cliffs of Dover. It has been the success of the North in our civil war which has most affected England. It was that which gave the liberal party their long lease of power after 1861. It was that which brought the ballot and which disestablished the Irish church. It is, perhaps, to a great extent, because our subsequent history has not been worthy of the country which achieved that great and heroic feat, that the English are to-day so well contented with their present manners and institutions. The essay on Democracy has the cautious and somewhat apologetic tone which it could not well help having, being written at that time; yet we are pleased to see that the author's idea concerning equality was even at that time incubating in his mind. He says: "Can it be denied that to live in a society of equals tends in general to make a man's spirits expand, and his faculties work easily and actively; while, to live in a society of superiors, although it may occasionally be a very good discipline, yet in general tends to tame the spirits and to make the play of the faculties less secure and active? Can it be denied, that to be heavily overshadowed, to be profoundly insignificant, has, on the whole, a depressing and benumbing effect on the character?" The especial object of this essay on Democracy was to call English attention to the public schools established by the French government. In this connection, the relative place which the state holds in France and England is spoken of.

In England, as here, it has been the custom to prefer individual action to state action. In France, the contrary is the case. In referring to the certain retirement of the aristocracy from that political position in England which they have formerly held, and of the sure advance of democratic rule, Mr. Arnold inculcates the necessity of preparing some power which shall in the future perform the same office for England which the aristocracy has performed in the past. The aristocracy has lent dignity to the government. When the government shall have fallen into the hands of the people, in order that its dignity may be retained, it will be necessary to give the state a stronger position in the community. It must be more generally felt, and must do more things. Such is Mr. Arnold's view.

It does not appear to be necessary that the power

of government should be increased in order to render it conspicuous. The government of a free state, if even far more limited than that of England, will be likely to be conspicuous enough. People love to think about politics and public action, in part, no doubt, because it takes them out of their narrow private concerns. It is nobler than the grocer's sugar or the tailor's cloth. Purity and respectability are qualities especially necessary to give dignity to government. No doubt, however, there is a close relationship between power and respectability. If a government be such as to command universal respect and confidence, it would be natural that the public should wish that great enterprises should be committed to its hands; if, on the other hand, a government be very powerful and penetrating, the public would be naturally jealous of its respectability. In the case of England, Mr. Arnold may be right in teaching that an increase in the power of the state is a condition of its respectability; he fears that the populace having obtained possession of power, the tone of government will be lowered, unless in the meantime the state be given so great a position in the eyes of the people that they would not tolerate action inconsistent with their conception of its grandeur and importance. In this country, on the other hand, respectability must precede an increase of the power of government. When the day comes that it shall command universal respect and confidence, we shall not be sorry to see it made stronger. What we are all conscious of needing is something to look up to. A great power set up in our midst, just, correct, wise and decent, would exert a most wholesome effect upon all varieties of public life; indeed, we are sure that it would exert an invigorating influence upon the character of every private individual.

"The Epic of Hades."*

IMAGINE yourself by twilight in a long gallery hung with tapestry, on which are seen figures of Greek mythology, each in its own compartment, or, if the chamber is not hung with real mediæval work, then with pictures painted by Burne-Jones, or some other of the pre-Raphaelites; suppose each figure to assume in turn enough life to make itself heard in silvery speech, but without departing too much from the peculiar ideal immobility, the strange, but not altogether displeasing unnaturalness that pervades the art of that English school of painters;—you will then understand "The Epic of Hades." It is rooted in the pre-Raphaelite movement, even more thoroughly than are the poems of Swinburne or those of William Morris, the brother of this author. On general principles it is not so original as the first poems of William Morris, because it really repeats, in a different phase, the same plan or plot. Instead of going far across the sea to find the islands of the Blest, as William Morris did in his first book, Lewis Morris assumes more the position of Dante, and finds

* *The Epic of Hades. In Three Books. By the Author of "Songs of Two Worlds."* Seventh Edition. Boston: Roberts Brothers.

himself confronted with visions of the illustrious dead in some under-world or other-world to which he is suddenly hurried in spirit; but it is only to awake again and find himself in the familiar scenes of Wales. If the later poet is not so original as his brother, he surpasses him in the sobriety and reticence of his art. He subdues that luxuriance of words which must surely damage the lasting fame of William Morris, and in consequence he may easily appear on a first acquaintance to be the owner of a powerful style. On closer examination, however, that virtue cannot be allowed him; it must be softened into a verdict of extreme good taste, rather than actual grasp and force. Yet, if passages are read by themselves, it is hard to avoid assigning him a higher rank in poetry. He is pre-eminently a poet who will extremely delight readers for a time, but who will not leave a mark on the generation. No blame need attach to a man for this; it is his fortune, not his fault, and any one who loves poetry ought to feel grateful toward a poet who serves up, even if it be for a single reading, so charming an intellectual repast. When the shade of Phædra addresses him, we get the following delightful picture of the young Hippolytus urging his chariot around the crescent-shaped beach before his father Theseus and his step-mother. The latter has already poisoned the father's heart against Hippolytus, and Theseus has prayed to Neptune to overwhelm his son. Phædra is speaking:

"A sudden gleam of sun
Flashed on the silver harness as it went,
Burned on the brazen axles of the wheels;
And on the golden fillets of the Prince
Doubled the gold. Sometimes a larger wave
Would dash in mist around him, and in fear
The rearing coursers plunged, and then again
The strong young arm constrained them, and they flashed
To where the wave-worn foreland ends the bay.

"And then he turned his chariot, a bright speck
Now seen, now hidden, but always, thine the surge
Broke round it, safe; emerging like a star
From the white clouds of foam. And as I watched,
Speaking no word, and breathing scarce a breath,
I saw the firm limbs strongly set apart
Upon the chariot, and the reins held high,
And the proud head bent forward, with long locks
Streaming behind, as nearer and more near
The swift team rushed—until, with a half joy,
It seemed as if my love might yet elude
The slow sure anger of the god, dull wrath
Swayed by a woman's lie.

"But on the verge
As I cast my eyes, a vast and purple wall
Swelled swiftly towards the land; the lesser wave
Sank as it came, and to its toppling crest
The spume-flecked waters, from the strand drawn back,
Left dry the yellow shore.

"I strove to cry,
But terror choked my breath. Then, like a bull
Upon the windy level of the plain
Lashing himself to rage, the furious wave,
Poising itself a moment, tossing high
Its wind-vest crest, dashed downward on the strand,
With a stamp, with a rush, with a roar."

If it be not too ungracious to analyze these charming pictures, we would say that they are not human enough. True, they are shades speaking, but they relate what they thought and did when they were on earth and were more alive than most of their fellow-creatures. So Phædra is made to feel the most violent revengefulness toward her step-son, although

the latter, far from spurning her guilty love, loves her in turn and is merely deterred by fear of the gods. Clytemnestra is also quite devoid of human attributes; she is too elaborately wicked for a fiend. These familiar characters of Greek literature describe themselves as if they were pictures, not realities, and after hearing them we see their figures posing in the typical attitudes which painters and sculptors feel it necessary to employ for their creations, in order that no one shall mistake them for any other heroes or heroines. So Andromeda says:

"There, on a sea-worn rock, upon the verge,
To some rude stanchions, high above my head,
They bound me. * * * All my robe
Fell from my lifted arms, and left displayed
The virgin treasure of my breasts; and then
The white procession through the moonlight streamed
Upwards, and soon their soft flutes sounded low
Upon the high lawns, leaving me alone."

While the author is plainly a member of the Rossetti-Swinburne-Morris school of poetry and art, he shows throughout his book a stronger tendency than any of the others to moralize. Although his shades are pagan, they occasionally speak of Christ, and when it comes to Olympus, and finally to Zeus the leader, it is not Zeus of the Greeks, but the god who thundered from Sinai, that is alluded to. He is hinted, rather than described, and does not speak like the rest of the gods, demigods and heroes, but is known by a divine effulgence which presses on the vision of the poet. The lesser characters either hint or state broadly their allegorical bearing upon the life of to-day as much as upon the life of the old Greeks. Sisyphus is the miser or the ambitious rich man, and his stone is the wealth that he piles up only to see it fall. The monster of Andromeda more obscurely symbolizes a great deluge, and again, by a very fine metaphor, conveyed in as fine a passage, is made symbolical of the evil that lies in wait for a young life, the latter being typified by Andromeda. In like manner, the hounds that slay Actæon are our senses that overcome us when we turn aside from our object in life to revel in sensuous pleasures. Now and then one comes upon touches like the "Idyls" of Tennyson. (Page 58:)

"Nor heard I tidings of her, knowing not
If yet she walked the earth, nor if she bore
The load of children, even as I had borne
Her in my opening girlhood, when I leapt
From child to Queen, but never loved the King."

Or, again on page 60:

* * * "And thus,
Love to a storm of passion growing, swept
My wounded soul and dried my tears, as dries
The hot sirocco all the bitter pools
Of salt among the sand."

The quality of verse of this newer comer is fine. Only now and then there is a questionable running together of extra syllables; or the ictus of the verse will fall upon a weak syllable, or an unimportant particle. The sense of rhythm is certainly stronger than in William Morris, but it cannot approach the feeling for rhythm developed by the genius of Swinburne. Mr. Lewis Morris is a charming poet for

the day. At the very close of the "Epic of Hades" he explains his symbolical connection of the old myths with the fortunes of men of the present day, and concludes:

"For while a youth is lost in soaring thought,
And while a maid grows sweet and beautiful,
And while a spring-tide coming lights the earth,
And while a child, and while a flower is born,
And while one wrong cries for redress and finds
A soul to answer, still the world is young!"

Seiss's "Miracle in Stone," and "Voices from
Babylon."

DR. SEISS has endeavored to give in his work on the Great Pyramid,* a clear and condensed and popular account of that most ancient, most mighty, and most marvelous monument of the past. From classic times this vast pile of masonry has held its place at the head of the "seven wonders of the world." In these latter days its mere mass and stability—without parallel as these are—have been dwarfed by the intellectual significance which has been given to it. The various pyramids of Egypt are commonly classed together; but the similarity of form which at first strikes the eye serves only to emphasize the essential difference between the Great Pyramid of Gizeh, and those other monuments of antiquity which are mere imitations of its external shape.

It is claimed—not by Dr. Seiss alone, but by such men as Professor Piazzi Smyth, Royal Astronomer of Scotland—that this wonderful monument was built 4,000 years ago, in the midst of the land of Egypt, and under Divine direction, to be an indestructible standard of measurement for the world. Professor Smyth went at his own expense to Egypt, and spent three months in making accurate measurements of angles, of the dimensions of passages, chambers, and external walls, which he published with the conclusions deduced from them, under the title, "Our Inheritance in the Great Pyramid," in 1864.

As a result of the labors of John Taylor, General Howard Vyse, Professor Smyth and others, some most singular conclusions have been reached concerning the pyramid. From the measurements taken of its various parts, from its peculiar form and mode of construction, sober-minded men have deduced scientific truths after which the race has been blindly groping for three thousand years. In this awful monument of a vanished past, they believe that they find a record which substantiates the Bible history, which solves problems now vexing the nations, and which points to a fuller and nobler future for the race. In a word, from these new measurements have been deduced a complete system of weights and measures; a new thermometric scale, combining the advantages of centigrade and Fahrenheit; a record of the precise length of the solar year; the true diameter of the earth; the mean density of the earth; the mean temperature of its climate; the parallel of latitude which divides into two equal parts the

northern hemisphere; the cycle of the precession of the equinoxes, and a hundred other results almost as wonderful.

To explain all this upon the ground of mere coincidence would be hardly philosophical; but just here proof comes in from the other pyramids. Many measurements of these have been made, but not one single number has come to light which seems to possess the slightest significance. So far, the teaching of the Great Pyramid seems sound, but when we find it pressed into the service of peculiar theological views in regard to the future, the mind of the untheological reader revolts, and suspicion is cast upon the whole. If, as is true, the verbal prophecies of the ancient seers have been made to sustain each new millennial scheme, how much more easily will the symbolic mysteriousness of this vast pile of masonry lend itself to the imaginations of those who unlawfully desire to look into the secret things of God!

Stimulated by greed of gold, in the year 820, A. D., Caliph al Mamoun, a son of Haroun al Raschid, of "Arabian Nights" celebrity, quarried his way into the mighty mass of rock. The covetous dream of treasure was never realized, but the closed chambers of the Great Pyramid, which had waited in silence and darkness through three thousand years, were at last accessible to the world. For centuries more the open secret lay unsolved; from time to time excavations and measurements were made, revealing new wonders of structure and marvels of design in the great pile of stone.

The 250 pages of Dr. Seiss's book do not permit a fair and full presentation of all the points he desires to make. The volume is merely a *résumé* of the large, elaborate, and expensive volumes of Smyth, but it is a *résumé* honestly and carefully made, though the style is extremely faulty, and the presentation sometimes obscure.

It is assuredly a notable fact, in these skeptical days, that any number of scientific men, whatever their religious creed, should have been forced to resort to the theory of Divine inspiration to account for a work hitherto considered to be of purely human origin.

A book upon prophecy* naturally creates a distrust in advance, since for the last thousand years or more, almost every religious vagary of the human mind has sought stability by establishing a fancied foundation in the vague utterances of the prophetic books. As the years and the centuries have rolled on, proving the falsity of these interpretations, the credulity of the race has been worn threadbare.

Dr. Seiss is a man of sound mind and logical acuteness, and in his "Voices of Babylon" has in large measure steered clear of the pitfalls which beset his work. He is remarkably lucid in his statement of fulfilled prophecy, and here and there gives an interpretation which commends itself as both sound and true. He is very careful not to let his imagination run

* A Miracle in Stone; or, The Great Pyramid of Egypt. By Joseph A. Seiss, D. D. Philadelphia: Porter & Coates, 1877.

* Voices from Babylon; or, The Records of Daniel the Prophet. By Joseph A. Seiss, D. D. Porter & Coates, 1879.

away with him in his paraphrases of the narrative. In many respects his moderation is to be highly commended; though he has a summary way of disposing of those who differ with him in opinion, which is neither courteous nor convincing.

The interpretation of the golden image of Nebuchadnezzar is new and very striking; the illumination which history throws upon the prophecies already fulfilled is well and vigorously shown. There is, however, in the volume, entirely too much paraphrasing of the Bible text, which adds nothing to its force or clearness, and too much moralizing. This, of course, in its original form of church lectures, was well enough; but as published comment it swells the bulk, while it adds nothing to the value of the work.

The latter part of the volume is devoted to the interpretation of the yet unfulfilled prophecies of Daniel. No date is fixed, but the author's views as to the meaning of the prophet are fully and clearly given. Like all such interpretation, it is extremely unsatisfactory to all who have no second advent or millennial views to sustain. One excellent feature of the book which should not be omitted in any notice of it is a careful translation, by a competent Hebrew scholar, of the Book of Daniel.

Gosse's "Studies in the Literature of Northern Europe."*

It would be better to call this collection of essays, originally printed in various English reviews and magazines, by the title "Notices of Writers of Northern Europe." For, strictly speaking, they are not studies in literature, so much as reports about the life and writings of mediæval and modern poets of Norway, Sweden, Denmark, Holland and Southern Germany. It could hardly be otherwise when the English public knows so little about the writers under review. Holland, although a next-door neighbor, and speaking a language closely similar to English, has almost always been neglected by the students of Great Britain. It is not surprising that up to the most recent times, the difficulty of acquiring a knowledge of the Celtic dialects in Great Britain should have made Celtic scholars rare, but that Dutch should have been so persistently slighted is something of a marvel. Nevertheless, it has been necessary to wait for Mr. Gosse—a poet of the Rosetti-Swinburne school, a student of Icelandic and Danish and the author of "On Viol and Flute" and "King Erik"—to point out carefully, and in detail, the large obligations that Milton owed to a Dutch writer of tragedies. Vondel was born before Milton, and published before him, but lived long after him. Born in 1588, he died in 1679, five years after Milton. His "Lucifer" was published in 1654 and Milton, who before he lost his eye-sight was taught Dutch by Roger Williams, is supposed to have begun "Paradise Lost" in 1658. It appeared in 1667. Very curious are the extracts

which Mr. Gosse has translated from the "Lucifer" of Vondel; in some respects the conceptions of the Dutchman are better than those of the great Englishman; but it is plain, from a review of the originals which are given in an appendix, that the older poet was greatly inferior in versification and force. The scenes of Vondel's drama are in heaven; the archangels and angels tread the boards in a magnificent manner, quite equal in the elevation of the general sentiment to the best of "Paradise Lost." When the heavenly hosts have been victorious and are rejoicing over the headlong fall of the rebel angels into space, a messenger arrives to turn their joy into lamentation; he relates how Adam and Eve have succumbed to temptation, that being the means employed by Lucifer to revenge himself for his overthrow. The cause of the rebellion in heaven is the creation of man, who, although "a little lower than the angels," is fated to surpass them after a long probation, and to take higher rank than they in the affection of the Godhead. Jealousy of man is thus the mainspring of the revolution among the angels and of wretchedness among men. The comparison between Milton's greatest work and the highest achievement of Dutch literature, here for the first time undertaken at any length, is of the utmost interest. A contemporary of Vondel was Tesselschade Roemer, a Sappho whom four poets continued to celebrate in verse while they lived. The death of one of them was hastened through unrequited love for her. Her finest lyric has been turned from Dutch into English by Mr. Gosse, who seems equally at home in all of the North European languages. The rhythm and spirit of her "Wild Songster" remind one of Shelley's "Sky-lark," although it is hardly within the bounds of the possible that Shelley should ever have known of the existence of this poem on the nightingale:

"Praise thou the nightingale,
Who with her joyous tale
Doth make thy heart rejoice,
Whether a singing plume she be, or viewless winged voice:

"Whose warblings, sweet and clear,
Ravish the listening ear
With joy, as upward float
The throbbing liquid trills of her enchanted throat.

"Whose accent pure and ripe
Sounds like an organ pipe,
That holdeth divers songs,
And with one tongue alone sings like a score of tongues."

So begin two poems to the wild and the tame songstresses, the latter being a human songstress. Tesselschade, like so many following poets, made the very natural mistake of calling the nightingale "she," when it is only the male bird that sings. Mr. Gosse has also close translations of bits from Hooft, Huyghens and Cats, all poets of great repute in their day.

One of the best essays in this very instructive and charming collection is on Runeberg. He is the greatest poet, and therefore the representative, of Swedish literature, although, as the reader is probably aware, he was a Finlander by birth and residence. His lyrical songs have been translated with exactness by two scholars of Oxford, and, quite recently,

* Studies in the Literature of Northern Europe. By Edmund W. Gosse. London: C. Kegan Paul & Co. 1879.

Miss Marie Brown has published in Boston a translation of his "Nadeschda," a minor epic of the present day with scenes laid in Russia. Between Tegnér, the author of the "Frithiof's Saga," and Runeberg, the writer has found no intermediate genius: no Swedish author stands midway between the ideal style of the former and the realistic vein of the latter. Strange to say, Mr. Gosse has discovered the middle link here in America, and moreover in the person of Longfellow. Longfellow is an anomaly in American literature, says this authority, and has the full character of a Swedish poet. "The poem of Evangeline has really no place in Anglo-Saxon poetry; in Swedish it would accurately express a stage in the progress of literature which is now unfilled. It is known that Mr. Longfellow has cultivated the language of Sweden with much assiduity, and has contemplated literary life in that country with all the unconscious affection of a changeling."

While Mr. Gosse is introducing to Great Britain the luminaries of Scandinavian and Germanic poetry, Mr. Alma-Tadema is living in London as one of the first painters of the day. He is from the Low Countries, and is therefore appropriately chosen to give an etching of the poetess Tesselshade as a frontispiece for the book. It is as archaeological as we may expect Mr. Alma-Tadema always to be. In the preface, Mr. Gosse explains that he is a follower of Sir George Dasent into Icelandic, and foreshadows a history of Icelandic literature for English readers. It will be a great undertaking, and though Mr. Gosse is hardly a critic of genius, no doubt he will do very good honest work in so congenial a line of research. There is no lack of Danish and Norwegian writers on the history of their common ancient literature; indeed the man who will wade through all the strange lucubrations of Scandinavian professors regarding their ancestral epics and histories must be made of solid stuff. Meanwhile he is doing a great service in supplying us with these popular essays. Their interest to the large number of people in the United States who have Dutch and Scandinavian blood in their veins needs hardly a mention.

Plato on Socrates (The New Translation).*

THIS new translation of those three works of Plato which particularly present Socrates in his daily life, and in his moral and religious character, deserves welcome in itself, as well as for the aim with which it is made public. It would be hopeless, no doubt, to attempt to popularize the philosophy of Plato, and no one would have opposed such an attempt more than the stately Athenian idealist himself. But his hero and master, Socrates, is especially a popular character—as much so as Abraham Lincoln, Dr. Franklin, or Martin Luther. Like them, he was one of the people; his life was among the people, though he also frequented the rich and great, and

compelled them, by his genius and sincerity, to frequent him. He may be described as a fourth term, standing between a religious missionary like Luther, a political humorist like Lincoln, and a philosophical man of the world like Franklin. Socrates had the great advantage over all these men, however, of educating his own biographer, and that, too, a man of vast genius, greater than himself, though appealing less forcibly to the popular love and sense of humor. Yet there were some inconveniences, too, some magnificent disadvantages in having Plato for a biographer. The philosophizing ideal tendency was so strong in him that he could not keep his hero on the plain level of ordinary life, but was continually putting him into the purple robes of his own rhetoric, which contrasted oddly enough with the homely garb and comical features of the real Socrates. In some of the Platonic dialogues little remains of the genuine Socrates except his pungent irony of catechism and his sly jokes; the rest is a soaring transcendentalist, who, not content with bringing philosophy down from heaven to earth, mounts up with his captive again into the thinnest air of speculative thought. In the three books here translated this is not the case; but here we have the jocose enthusiast himself in all his native strength and strangeness of character. The "Apology," or "Platonic Defense," as Mr. Grote terms it, tells the story of the old man's life as faithfully as did the poems of Lucilius, according to Horace, set forth that garrulous Roman's haps and mishaps:

"Quo fit ut omnis
Votiva pateat veluti descripta tabella
Vita senia."

The "Crito" exhibits Socrates in his intrepid preference of civic duty before disobedience even to unjust laws, which only punished him with death; while the "Phædo" shows upon what a solid foundation of faith his hope of immortality rested. In this dialogue Plato seems to have introduced his own poetical theories of the universe, some of which are omitted or condensed in the translation before us, as not bearing specially upon the life of Socrates, which it is the purpose of this translator to present in a plain and simple form.

This purpose has been accomplished, and that without those conspicuous felicities of translation upon which many scholars have prided themselves, and to which Plato's prose so tempts them. There is a careful, unadorned grace in the renderings, which betokens much study and a familiarity with high themes; but the masculine strength of conception which excuses many serious faults in Taylor's translation, and the thrice-polished fluency of Jowett's version are equally wanting in this American translator. There is also a perceptible—it may be a premeditated—avoidance of those close-packed phrases, vital in every part, which Plato, like Dante and Shakspeare, was in the habit of using, where an ordinary writer would have found a plain adjective of common significance sufficient.

This translator is more intent upon the serious doctrine of Socrates than upon his jests and repar-

* Socrates. A Translation of the Apology, Crito and parts of the Phædo of Plato. New York: Charles Scribner's Sons.

tees, in which he was as adroit as an Irishman, and which Plato reports as carefully as when gravely discoursing at his highest point of spiritual insight. It is in this paradoxical union of qualities naturally so foreign to each other, that we find one secret of the wonderful influence exerted by Socrates in his own time; and it is this, as much as anything, that has preserved his great renown. For popular effect, therefore, and, still better, for a full comprehension of the man himself, this side of his nature should be brought out more forcibly than most of the translators have condescended to do. It is also the side most in accord with the modern turn of mind to which Plato and Aristotle generally seem so strange. We trust that the modest scholar, who has gone thus far in his labor of love, will not stop here, but will give us condensed translations of other dialogues. His work is commended to the reader by Professor Goodwin of Harvard College, as well as by its own unobtrusive merit. In a brief introduction, the facts concerning Socrates are given, and Professor Goodwin writes a preface containing much in little. The wood-engravings of the busts of Plato and Socrates which accompany the text are by Henry Marsh and J. G. Smithwick respectively, and exhibit strength and delicacy, and rare faithfulness in reproducing the textures of the different materials of the busts.

Boyesen's "Falconberg."

MR. BOYESEN has opened an entirely new field of romance among the settlements of Norwegians in the North-west. The contact of slow, conservative farmers from Scandinavia with the bustle and stir of Anglo-Saxondom in its American phase cannot fail to offer picturesque situations, and these Mr. Boyesen has liberally used. If Helga Raven and her lover Einar do not correspond with the actual immigrant of either sex that comes to us from Norway, we have no means of contradicting the author. Knowing so little of this people, we are glad to take his word for the characters that move through his book. At any rate, we can see that they are natural—nay, more; we can perceive that they correspond pretty nearly in a general way to the characters that people the literature of their forefathers—the old Icelandic. They are not so sanguinary as the sea-rovers, but they have the same quiet, the same stolidity, and, when finally aroused, the same overwhelming way of solving a question by resort to the most energetic methods. The born Americans in "Falconberg" are not many; chiefly a Dr. Van Flint, who pursues Icelandic in the spirit of an enthusiast, and George Washington Bingham, Esq., a young man from the Eastern states who uses the simple Norwegians for his own political ends, and sets them all by the ears as a means to the attainment of his ambition. "Falconberg" marks a distinct advance in Mr. Boyesen from the level of his "Norseman's Pilgrimage." One cannot read

of the struggles of the hero to throw off the incubus of his crime, which, committed in the old country, yet rises up to blast him at the very moment of success, without feeling that Mr. Boyesen is going deeper into character and taking a broader view of the world and men than ever before. In connection with Falconberg's crime and emigration to America, it is interesting to remember that Almqvist, a notable Swedish *littérateur*, was accused of forgery and even worse, and, though the truth of the charges was never proved, made his escape to America in 1853.

"Mansfield's Personal Memories."

A VETERAN editor, graduated at Princeton and West Point, and a resident for almost a life-time in the metropolis of the Ohio Valley, could hardly write a book of recollections that could fail of being interesting. In this volume one finds the romantic Madame Blennerhasset galloping across country in the days of her prosperity; Dr. Lyman Beecher in his oddities and his power; Mrs. Stowe in the day of her early successes; that most brilliant of the earlier Western writers, Judge Hall; the ablest of early Western scientific men, Dr. Daniel Drake; the great polemic, Alexander Campbell; the great Cincinnati astronomer Mitchel; Gallagher, and other Western poets; Powers, the Cincinnati sculptor; Judge Burnet, and innumerable other people of note. There is not much book-making skill shown in the work. The venerable author, despite all his experience, writes straight on, not caring to group his rich materials with any skill, while the proof-reading is the worst we have seen from any reputable house. The proper names of well-known people are spelled with a carelessness that, in some cases, becomes even ludicrous, as, for instance, where General Ormsby Macknight Mitchel is transformed into Ormsby McNight Mitchell. But the author's keen interest in the affairs and men of the past gives a positive interest to his valuable memories, and his quaint, old-fashioned notions and positive opinions make the controversies of the past seem to be alive. He is an anti-Jackson, United States Bank protectionist to-day, and his religious convictions are expressed with equal firmness. Altogether, the book is one of the most valuable of its kind, and we hope the venerable writer may be spared to give us another volume.

Cable's "Old Creole Days."

IT would be hard to pick out the most charming from these Creole tales. We might make a beginning by eliminating that called "Café des Exilés"; not because it does not show us an entirely new and most piquant phase of New Orleans life, but because, relatively to the others, its plot is less clearly drawn, and its dialogue—the peculiar English of the Louisiana Frenchman and Spaniard

* Falconberg. By Hjalmar H. Boyesen. New York: Charles Scribner's Sons.

* Personal Memories, Social, Political, Literary, with Sketches of many noted people. By E. D. Mansfield, LL. D. 1893-1894. Cincinnati: Robert Clarke & Co.

† Old Creole Days. By George W. Cable. New York: Charles Scribner's Sons.

—is less intelligible. Yet, even in this, how delightfully Mr. Cable introduces us to his heroine, the daughter of an exile of noble family, who, having escaped the insurrections in the West India Islands, is forced to keep a café at New Orleans! "Posson Jones," which appeared originally in "Appleton's Journal," brings before one the curious contrasts of race that were and are still found at New Orleans. There is the herculean Parson Jones from West Florida, with his strange English,—half Bible, half poor white; and there is the devil-may-care, happy-go-lucky Jules de St. Ange, with whom Parson Jones forms a street acquaintance. The hangers-on and satellites of these two, one a mulatto, the other a coal-black negro, are as good as their masters. It seems a pity not to use the story, or rather let us say, not to use the talents of its writer, for the drama. In "Sieur George" the mystery of the life of the hero is well kept to the end; "Tite Poulette," however, turns out rather tamely. Tite Poulette is supposed to have a tinge of African blood; but the author makes her a pure white before marrying her to Kristian Koppig, the rosy young Dutchman. Mr. Cable is quite inimitable in the way he suggests a charming, delightful woman: witness the young girls of the De Charleu family in "Belles Demoiselles Plantation," and the heroine of "Madame Délicieuse." But he reaches his greatest height in "Jean-ah Poquelin," the story of an old slave-trader who adores his younger brother, and at last consents, at the urgent request of the latter, to take him with him on a voyage. Jean Poquelin comes home alone and shuts himself up with a deaf and dumb slave in a great dilapidated house which stands in a marsh. Gradually, to his reputation of a slaver people add the suspicion of being a murderer, the infamy of being a wizard. A mob that comes to serenade him discovers that he has lived a terrible life of self-sacrifice and isolation. The man who can write such a story is no mere talented writer; he is a genius in his way.

Stockton's "Rudder Grange."

THE test of an orator, says a French critic, is the effect that he produces, and certainly the first test of humor is its result upon the reader. Tried by this rule, "Rudder Grange" is fairly entitled to be ranked as a specific for all ills that have their origin in lowness of spirits. It is not a witty book; but it is full of humor, and of good, healthy animal spirits. From the first chapter, in which, in their enthusiasm, a young couple rent an old canal-boat, in which to set up their *loves*, down to the very ludicrous finale, the situations are irresistibly funny. Nor is the fun all in the situations—Pomona, with her blood-and-thunder novels, her stage-mania, and her ready, but sometimes desperate, tact, is a real original in humorous literature. Euphemia, in whom the foibles of womankind are gently satirized, the matter-of-fact Boarder, and the romantic owner of Rudder Grange are all well individualized. There is a vein of commonplace in the book, but we question whether, after all, even this does not help one to see better the surprise when it comes. The very home-

liness of its topics, of its situations, and of its usually well-directed satire, make it a good book to read aloud; for one wants to enjoy this humor of everyday life with a friend, or, better still, with a family of young people. We know of no humorous book of the year that will bid higher for the attention of those in search of "summer reading."

A New Edition of Longfellow.

AN elaborate and expensive edition of this author is now being prepared by Houghton, Osgood & Co., under his personal supervision and subject to his constant advice. Mr. Longfellow is not merely the most popular in his own country, but the best known and most cherished poet throughout the length and breadth of the English-speaking world. His fame extended long ago to Germany and Scandinavia, and for a great while he was supposed by well-read people of those lands to be the only eminent representative of American literature. It is too soon to form a critical judgment on the pages so far issued. Three parts, of thirty or forty large quarto pages each, are not enough to judge from without a proviso; but it is plain that no expense has been spared in the endeavor to make it an *édition de luxe*. A line steel portrait by Mr. William E. Marshall opens the first number, taken from a photograph chosen by the poet himself. The wood-cuts are numerous, and employ some well-known engravers. Decorations for the sub-titles under which the different volumes, now issued together, originally appeared, are supplied by Mr. Ipsen. The list of artists appears to embrace a good many favorite illustrators of fine books. The work will be completed in the autumn of 1880.

Mr. Marshall's Recitals.

THE platforms of our cities creak under the tread of swarms of readers, elocutionists, lecturers and vocal artists, among whom few can claim any real artistic merit. Coming neatly within the charmed circle is Mr. John Marshall, whose recent recitals at Chickering Hall are yet fresh in the minds of those who heard them. His voice is naturally sweet, strong and full; and it has, moreover, been trained into flexibility and expressiveness. His style of delivery is individual and magnetic, and has considerable range. Shakspeare on the platform has, it must be confessed, unheard of capacity for dullness in dull hands, but Mr. Marshall's handling of the closet scene from "Hamlet" was directed by a discriminating interpretation, and gave expression to a varied ebb and flow of emotion. In the rendition of minor poetry, Mr. Marshall has every promise of success. In some cases he is able to give entirely new meaning and incontestably better form to many well-known poems, such as Burns's "A Man's a Man for a' That," and "Lady Clara Vere de Vere." Mr. Marshall's facility in humorous characterization is also worth mention. In "The Collection for Ballysloughguthery Church," he has well expressed the nice distinction in the two Irish brogues,—the, so to say, educated brogue of the priest, and the more ignorant "burr" of the peasant.

THE WORLD'S WORK.

Novel Method of Testing Iron Wire.

AN apparatus, founded on well-known laws of electro-magnetism, has been recently brought out that promises to be of great value in testing iron and steel wire. Upon a firm foundation is placed a helix of insulated copper wire wound upon a spool of paper, rubber, wood, or other non-conducting material, and through the center of the spool is bored a hole, so that a wire rod may be passed through the helix. When the helix is connected with a battery, any piece of iron passed through it becomes an electro-magnet. Opposite one end of the helix is placed a magnetometer, having a needle delicately balanced and placed upright. The magnetometer is placed upon a sliding support so that it may be placed in any position in relation to the electro-magnet, and by moving it forward or backward before the helix, a point may be found where the needle will indicate the maximum intensity of the magnetism in the wire rod. The magnetometer is then fixed in this position by binding screws. The rod of soft iron in the helix being of known density and tensile strength, it becomes, by the aid of the magnetometer, a standard of comparison in testing other wire. The needle of the magnetometer has an aluminum pointer riveted to the upper end, and as the needle moves the pointer traverses a semi-circular scale divided into 180 degrees, marked from zero in the center to 90 degrees each way. After arranging the apparatus with the test piece of soft iron so that the pointer rests at zero, the rod is removed and a steel rod of the same size and length and of known density and strength is placed in the helix. At once there is a change in the position of the needle, indicating a change in the magnetism of the wire. When the needle is at rest, its position on the scale is carefully noted. This gives the relative magnetism of two rods of the same size and length and varying density and strength, and from this data, it is easy to measure the comparative density and strength of other wire of the same size. Reels are set up on either side of the apparatus, and upon one is wound a quantity of steel wire to be tested. Having passed the wire through the guides, under the needle and through the helix, it is fastened to the other reel. On turning the reel the wire passes through the apparatus, becoming magnetized as it passes the helix, and recording its magnetic condition by the position of the needle, and thus its density and strength. If, while the wire is passing, the needle falls to zero or below, it shows that the portion of the wire then in the apparatus is of the same or less density than the soft iron test rod, and as the needle approaches the point marked by the steel test rod, so the density approaches that of the steel test rod, and thus its comparative strength may be seen at once. If there is a flaw, crack or break in the wire, though it is not visible on the surface, the needle instantly shows it, as

every change, however small, in the density of the wire is indicated by a change in its magnetism. This most interesting apparatus can be arranged for testing plates, shafting, columns, parts of guns and machinery of every shape and size, and seems likely to prove of great value in finding flaws and minute imperfections in iron that cannot be found by sight or touch.

New Salt-water Condenser.

THE demand for fresh water for the use of the passengers, and for supplying the boilers on board steam-ships, has led to the use of extra fires and boilers for making steam that may be turned into water in a suitable condenser. A new form of steam-boiler for obtaining fresh water utilizes the waste heat of the smoke-stack and saves the expenses and labor of the extra fire and boiler. An oval-shaped vessel of iron 7.6 centimeters (3 in.) in diameter, as long as the interior diameter of the smoke-stack, and of any convenient width, is hung on edge in the stack at the level of the deck, or just above the furnaces. This forms a boiler using the waste heat of the fires without materially injuring the draft. One end of the boiler is connected with a tank containing sea water placed on the deck and at the other end is a steam-pipe for taking the steam to some form of condenser. In the boiler is a scraper, hung upon a rod that passes through both ends of the boiler, and by drawing the scraper backward and forward the salt that accumulates in the boiler may be scraped off and removed through a hand-hole at the bottom. All parts of the apparatus appear to be worked out with care, and it is said to give a good supply of fresh water with very little attention and at no extra expense. The economy of the boiler has already led to its adoption on several lines of steamers.

Improved Refrigerating Apparatus.

THE export of fresh meat from this country and from Australia and South America to Europe has led to the invention of a number of processes for keeping the meat cool during the voyage. The most simple, and, so far, the most successful, process consists in making an air-tight chamber in the steamer, and pumping air by means of a fan and special engine, through a series of pipes packed in ice. The air is cooled to about 35° Fahr., and is deprived of its moisture by condensation in passing the pipes, and the meat is preserved perfectly so long as the supply of ice holds out and the fan is kept in motion. An improved process recently announced dispenses with the use of ice and accomplishes equally good results, with only a moderate expenditure of power. The new method is founded on the simple fact of the heating and cooling of air when compressed and allowed to expand. A meat chamber of any convenient shape and size is fitted

up, and near it is placed an air compressor driven by steam-power. The first result obtained is a heating of the compressed air, and to get rid of this heat, a spray of cold water is let into the chamber containing the compressed air at each stroke of the compressor. This lowers the temperature to that of cold water, and by an ingenious system of fine grating, the moisture that saturates the compressed air is extracted. The air is passed through a series of finely perforated disks, on which a large proportion of the water is caught and allowed to pass away through suitable valves. Within the meat chamber are arranged a series of pipes hung up in zigzag form (probably straight pipes joined by return-bends), and the compressed air is allowed to pass through these, still farther chilling it and removing by condensation the remaining moisture. It then passes to the cylinder of an engine and is there allowed to expand in driving the engine. The exhaust air is then taken by pipes into the meat chamber, and there allowed to expand to atmospheric pressure. The engine is also coupled to the steam engine that drives the compressors, and thus the air in expanding performs part of the visible work of compressing. By this ingenious process the air is cooled three times and enters the chamber, not only dry, but very cold. There is less waste of power by this process, and a far lower degree of cold and a freedom from dependence on ice. By taking the air for compression from the chill-room a still lower temperature may be obtained, and by joining one apparatus to another, there is apparently no limit to the lowering of the temperature of the air. The practical limit is found in the freezing of the lubricants used in the engine that is driven by the compressed air. Oil is frozen solid and stops the engine, and in practice it is found that glycerine must be used, and here the process stops, for, if the chilling and recharging is carried farther, the glycerine must freeze and the engine will be unable to move. The process has been kept in operation for three months without stopping and has proved to be entirely practical and satisfactory, and will undoubtedly soon be tried on steamers making long voyages.

The Horograph.

THE success of the electric pen has led to the introduction of two new forms of perforating or stenciling pens. One of these employs compressed air as a motive power in driving the needle. A small cylinder is placed at the top of the pencil or handle, and in this is a diaphragm that, under the impulse of puffs of air from a small compressor driven by foot or other power, moves rapidly up and down and thus actuating a needle affixed to the center. This form of stenciling device is already in use to a limited extent. The horograph is a pencil with a perforating needle driven by clock-work. The needle is fixed to a cam that is operated by a spring and suitable gearing, and moves at the rate of several thousand strokes a minute, so that the paper is perforated even when used for slow writing or drawing. A key is fixed to the handle of the instrument, and by

pressing it with the thumb, the needle may be stopped or started at will. The key for winding up the spring is hinged to the side of the case that contains the works. A ring is attached to the top of the case to suspend the pencil by an elastic cord from the ceiling, to relieve the weight from the hand, but in ordinary work it is found the hand soon becomes accustomed to the weight, and it may be used without assistance. The copying is performed in the same manner as with the electric pen.

Improved Violin.

THE violin, though often the subject of experiment, has not been materially altered in form for more than two hundred years. A recent improvement introduces an additional sound-board, and makes a more radical change in its construction than anything tried since the days of the great Italian violin-makers. The new sound-board exactly follows the shape and curves of the breast, or top, of the violin, and is placed between the breast and back. It has a base bar, sound openings and sound-post, and is securely fastened to the sides of the instrument. The oval openings are a trifle larger than those in the top, and the sound-post is placed near the regular sound-post which passes directly through the new sound-board. The extra sound-board is made of well-seasoned pine, and divides the instrument into two parts or chambers, and practically making a double instrument of the violin without changing its external appearance or adding materially to its weight. The effect of this additional sound-board is to greatly increase the volume of the sound and, by developing obscure and partially lost over-tones, to enrich the quality of the tone. The improved violin has already attracted the favorable attention of musicians, and is soon to be manufactured upon a commercial scale.

A New Gum.

THE persistent search for new gums allied to gutta percha and rubber, has been rewarded by a new gum which has been named "Belata." It is won from the "bully tree," a native of the Amazon region, and in appearance it is said to closely resemble gutta percha, though it is tougher and more flexible. It is tasteless and has an agreeable odor when warmed. It may be joined piece to piece at 120 Fahrenheit, and melts at 270 Fahrenheit; is soluble in cold benzene and carbon disulphide and in warm turpentine. It may be strongly electrified by friction and is a better insulator than gutta percha. It is thought that the gum will find many uses in the arts.

Removing Metallic Substances from Grain.

THE introduction of grain-binding machines employing iron wire to bind the sheaves very quickly led to the discovering that the bits of wire, cut off each time a sheaf was bound, caused a great deal of trouble in the after process of grinding. The ends of the wire mixed with the grain reached the

mill only to break and scratch the stones and machinery, and to produce friction and heating that sometimes resulted in setting fire to the mill. So serious became this matter that the millers objected to receiving any grain bound in machines using wire. Fortunately, the difficulty has been surmounted by the introduction of appliances for removing the bits of iron from the grain before passing it to the mill. Experiments showed that a common magnet hung in a grain-spout would catch and retain particles of metallic substances mixed with the grain. Several methods of accomplishing the same results are now in use in Western mills, and they may be divided into two classes: those using permanent magnets, and those using electro-magnets. It has been found that a dozen "machine" magnets (preferable to "horse-shoe" on account of their shape) hung in a grain-spout are sufficient to arrest every particle of magnetic metal, from pieces of wire several centimeters long, down to iron filings and metallic dust. The usual plan is to saw off a portion of the top of the spout and to divide it into three pieces and cut holes in each piece for the legs of the magnets, placing four magnets in a row across the spout. This gives three rows of magnets placed directly or diagonally across the stream of grain, the diagonal position being considered the best as the grain is driven from side to side in passing, and brought into close contact with the magnets. The magnets may be lifted out of the spout in groups of four by taking off one of the covers, and may then be cleaned and put back without disturbing the others. Another method of hanging the magnets is to cut three slots across the spout, and hang the magnets on a rod with blocks between them to keep them in position. By this arrangement, the magnets may be removed one at a time, or in groups of three or four, as most convenient. By taking out only a portion of the magnets at one time, enough of them remain to keep up the work while the others are being cleaned. The metal adhering to the magnets is easily brushed off, two clearings in a day being found sufficient. By employing bars of soft iron in connection with coils of wire and a battery, electro-magnets may be used, and in lifting out the magnets it will only be necessary to break the circuit, when the metal adhering to them will instantly drop off. Another form of apparatus employs horse-shoe magnets, having a paper or wooden filling between the legs, set upright on the ends of arms revolving horizontally in a circular tank, very much after the manner of some forms of mixing-machines. The grain is delivered at the edge of the tank, and is pushed by the revolving magnets toward the center, when it escapes through an opening in the bottom of the tank. Another device employs a

series of permanent magnets and a traveling apron for conveying the grain away after it has passed over the magnets. The only advantage of the use of electro-magnets is in the facility of cleaning them by breaking the circuit and demagnetising the iron. By suitable clock-work this can be done automatically, provided there are appliances for shutting off the grain and for catching the metallic dust when the magnets are thrown out of action. The first and most simple of these grain-cleaning appliances was brought out by persons interested in mill property, and has been wisely given to the public without patent restrictions. The other appliances are patented.

New Method of making White Lead.

A NEW method of making white lead is announced that, while it is based on the chemistry of the present system, is entirely unlike it in mechanics. The lead, instead of being cast in thin plates or "buckles" and then submitted to the fumes of a weak acid while buried in a mass of fermenting manure as in the "Dutch process," is poured while melted into an iron sieve. It drops through the meshes of the sieve into water and assumes the form of slender threads. A mass of these threads are then placed in a tank and vinegar is poured over them and allowed to drain away. Enough of the acid clings to the lead to cover it with a film and as the air passes among the threads the lead is oxidized. The vinegar is then poured over the threads again. This time it carries away the acetate of lead formed on the surface of the threads, and at the same time leaves a film of vinegar behind. This alternate moistening of the lead with the same vinegar finally produces a concentrated solution of basic acetate of lead, and by passing a current of heated carbonic acid gas through the liquid the carbonate of lead is formed. The clear vinegar may then be drawn off and, added to a fresh supply, may be applied to the lead again in the same manner till the threads are consumed.

Proposed Treatment of Hop-vines for Fiber.

A NEW process is announced that promises to add greatly to the value of the hop crop. The stems of the vine are boiled in water containing soda or soap for about forty-five minutes and then thoroughly washed in clean water. They are then boiled in a very delicate solution of acetic acid. This causes the skin to part and the interior fiber may be washed out in water and dried. The resulting fiber is said to resemble flax and to be very soft and elastic. Should the process prove of practical value upon a large scale it will be of great benefit to our already large hop-growing interest.

BRIC-À-BRAC.

The Heart of a Rose.

A BUTTERFLY wooed a rose,
But the rose cared not,
Her petals began to close,
And her blush was hot.
The butterfly lingered an hour,
Then flew to another flower.

A nightingale in the copse
Sang a secret strain,
And sweeter than dewy drops
Was his plaint of pain;
More sweet to the rose did it seem
Than morning's awakening beam.

For whom was the music made?
Not for thee, pale flower!
Thy blushes must faint and fade
With the twilight hour.
The nightingale singeth for all
The roses that fail and fall.

Ah! doubtless it had been best
To have felt, fair bud,
The butterfly from thy breast
Suck the honey-blood.
The butterfly loveth not long—
The nightingale loves but song.

"Ah, no!" said the rose, "not so!
It were best to die
Unkissed, with the sacred glow
Of a secret sigh
For something beyond and above;
This, *this* is the crown of love!"

H. W. AUSTIN.

Studies in Style.

BY IRWIN RUSSELL.

BURNS.—*An Epistle to John Howard.*

DEAR SIR: I never saw your face,
But yet, for some few moments' space,
To tak' a friend's familiar place
Is my design:
The friend o' a' the human race
Is surely mine.

Here is my han', sir; will ye tak' it?
An honest man may safely shake it,
For, 'spite o' Fate, nae powers shall mak' it
Be stained wi' crime—
May a' its little force forsake it
Afore that time!

'Tis little that I hae to offer—
My humble muse expects you'll scoff her,
And scarce she daurs to mak' the proffer,
It is sae sma':
My best guid-will: pray tak' it of her,
For that's my a'.

I hae nae flatt'rin' words to gie you;
I only say, sir, God be wi' you!
And whan from life He wills to free you,
May you repair
To His ain house—I hope to see you
Whan I am there!

This warld, I hope you may improve it,
But yet I doubt the de'il could move it
Except in tracks already groovit—
Howe'er, if sae,
There is nae harm to *try* to shove it
Anither way.

The warld, they say, is gettin' auld;
Yet in her bosom, I've been tauld,
A burnin', youthfu' heart's installed—
I dinna ken,—
But sure her face seems freezin' cauld
To some pur men.

In summer though the sun may shine,
Aye still the winter's cauld is mine—
But what o' that? The manly pine
Endures the storm!
Ae spark o' Poesy divine
Will keep me warm.

But I am takin' up your time—
Worth sae much mair than my pur rhyme
That ye will hear sic verses chime
And no cry "hark!"—
Sae, wussin ye success sublime,
I mak' my mark.

HERRICK.—*A Preachment.*

O man! if hard thy fortune,
However fate importune,
Turn not to wrong—none find, or will,
Their good enlarged by doing ill.

As boats that row in Venice
Just so the life of men is:
Our course goes crooked o'er the tide,
With but a broken oar to guide.

Thy heart of oak then cherish,
Or sure thy soul will perish—
The soul is but a boat that goes
Whatever way the heart hath chose.

Adrienne

"ADRIENNE, est-ce que tu m'aimes?"
"Non, non, du tout, du tout!"
"Pas un petit peu?"
"Oui, oui, beaucoup, beaucoup!"
"Combien?"
"Jusqu'à te manger!"

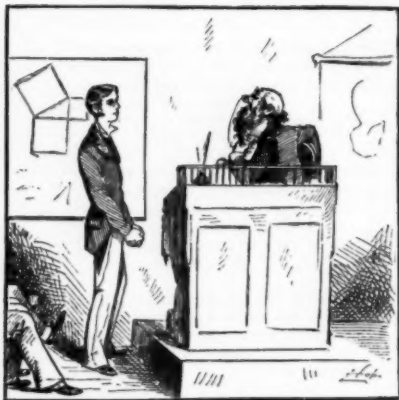
"AND dost thou love me, my Adrienne?"
"Oh, no," said the coquette, "I love you not!"
"What, not the least particle? Think again!"
"Oh, yes, I do love you a mighty lot!"
"How much, my sweet child, dost thou love me,
then?"
"Just enough to eat you upon the spot!"

MY DEAR EDITOR: This droll little story is founded on fact. The words are the very words of an actual conversation, in the drawing-room of the Hotel of the Isles of Gold, at Hyères. Adrienne had seen just four summers, and I was her devoted lover. J. W. W.

LAFAYETTE, INDIANA.

College Comicalities.

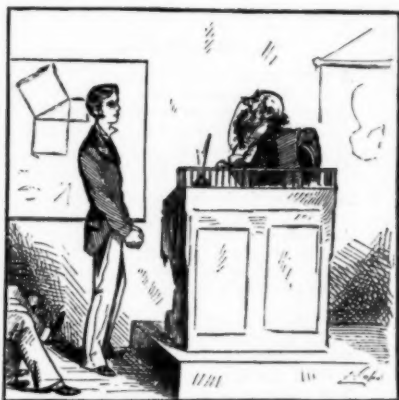
With illustrations à la mode.



I. THE FRESHMAN. SCIENCE.

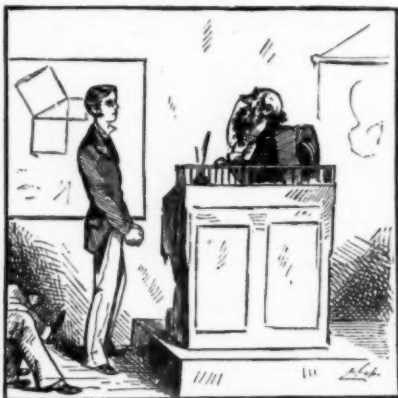
Sarcastic Tutor.—So that's a spherical segment, eh? Then I must confess I don't understand your diagram!

Cheeky Freshman.—Don't you? Well, just come around after the hour, and I'll explain it to you. (*Sensation.*)



III. THE JUNIOR. LOGIC.

Professor.—What is the universal negative?
Junior (taken by surprise).—Not prepared.
 (*Temporary suspension of hostilities.*)

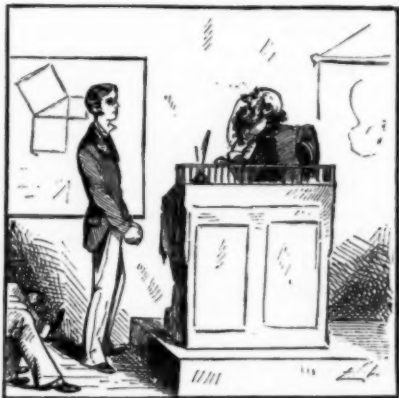


II. THE SOPHOMORE. CLASSICS.

Benevolent Tutor (prompting).—Now, then, εἰπας—

Somnolent Sophomore (remembering last night's studies).—I make it next.

(*He goes it alone before the faculty.*)



IV. THE SENIOR. LITERATURE.

Lecturer.—In his darkest hours, Milton could still forget his sorrows, while pouring forth his soul to the deep harmony of the organ. Do you remember, sir, a more modern instance of the same thing?

Senior (doubtfully).—Johnny Morg—
 (*Prolonged applause.*)

The college year is altogether unlike any other year whatsoever, in that it has its end at its commencement. In other particulars, life in college is different from life outside of scholastic halls, and in nothing is this difference more marked than in humor. The college joke is only too often practical. The

humor of it is the visible humor of another person's discomfort. The wit is the obvious wit of having some one else at a disadvantage. But side by side with this reliance on horse-play, which grows perhaps out of the student's great delight in ponies, side by side with this rough-and-ready, rough-and-

tumble practical joking, lies a keen appreciation of technical repartee, of collegiate impromptu, of the give-and-take dialogue of professor and pupil. And this scholastic jesting falls readily and inexorably into two classes: in the anecdotes of the first class, the professor is brutal to the pupil, in that he uses his superior power to hold the student up to ridicule; in the anecdotes of the second class, the pupil is impudent to the teacher. There is a third class of possible anecdotes, in which the student is simply stupid; but this class has never been popular at college, and need not be considered at length. In the second class, the pupil sometimes substitutes with success a lightning-like presence of mind for the customary "cheek"; but fundamentally the division of college repartee into the knock-down blow of the professor and the happy-go-lucky impromptu of the pupil, is accurate.

It is with a view to setting forth especially the last class of collegiate jest, that the four accompanying and expensive illustrations have been prepared; and that the legends which adorn them, and point the moral, have been borrowed (for the most part) from "Acta Columbiana," one of the two papers published by the undergraduates of Columbia College,—a bright and lively little sheet, which has of late been fresh in spirit, and refreshing in tone, less local, less cheap and more truly literary than most undergraduate journals.

ARTHUR PENN.

Union Square: 7 P. M.

LYING in laziness
In the midst of the town,
While the dim haziness
Gently comes down;
Dreaming of myrtle
That grows on the mountain,
Unheeding the spurtle
And plash of the fountain;
Unheeding the twilight,
Fast fading to night,
As on spire and on skylight
Late sun rays shine bright:

Dimly the evengloom
Sifts o'er the park:—
Haste all the workers home
Ere it be dark;
Lawyers thought-laden,
Recalling a digest;
Young man and maiden
Exchanging a sly jest;
With hatred unspoken
Come husband and wife;
And aged men, broken
On the breakers of life.

Right in the scurry,
And turmoil and worry,
Marked I a girl,
Pressing with hurry
On through the whirl.

Seemingly simple
And modest and meek,
Spite of the dimple
That lurks in her cheek.
Neatly her tresses

Are coiled on her neck.
Tidy her dress is—
She's no money to deck
Her beauty Circassian,
To trick out in fashion
Her delicate age;
A saint of this latter day
Getting each Saturday
A poor, paltry wage.

The birds chirp and chatter,
And are mad as a hatter
And dive out of each nest.
As I rise to gaze at her
By her beauty oppressed.

Does she sew? does she hem?
Does she labor for them
With whom each day is May-day?
Does she struggle and stitch
For the negligent rich
Forgetful too oft of the pay-day?
Who make broad their phylacteries
On Sunday in church,
Though they've left in the lurch
All the poor in the factories?
Does she labor for these—
Who will pay—when they please?

Walking with stride so free,
Lowly her station.
What can her calling be?
What her vocation?
Sturdy her shoulder is—
Best of reminders!—
She a book-folder is
At a book-binder's!
This very magazine
She may prepare!
These very sheets are e'en
Under her care.
These very verses p'rhaps
Written in haste,
She will, with gentle taps,
Make ready for paste!

A tremulous shimmer
Fades dimmer and dimmer,
Till but a glimmer
Is left of the light,
And then it is night.
The beautiful being
Passes onward away,
Passes out of my seeing,
Glides out with the day.

J. B. M.

Speaking Features.

WHENE'ER I talk with my sweetheart
She speaks with her great brown eyes,
And if (and 'tis often) I'm witty
A gladdening smile replies.

If (rarely) I grow sentimental
And out-Romeo Hamlet the Dane,
With a golden-lined cloud on her forehead
She frowns me to wisdom again.

And if I sing her some love-song,
And show all the feeling I can,
The rose on her cheek is her "thank you,"
Oh, I am a fortunate man!

N. H. D.



THE HIT OF THE SEASON.

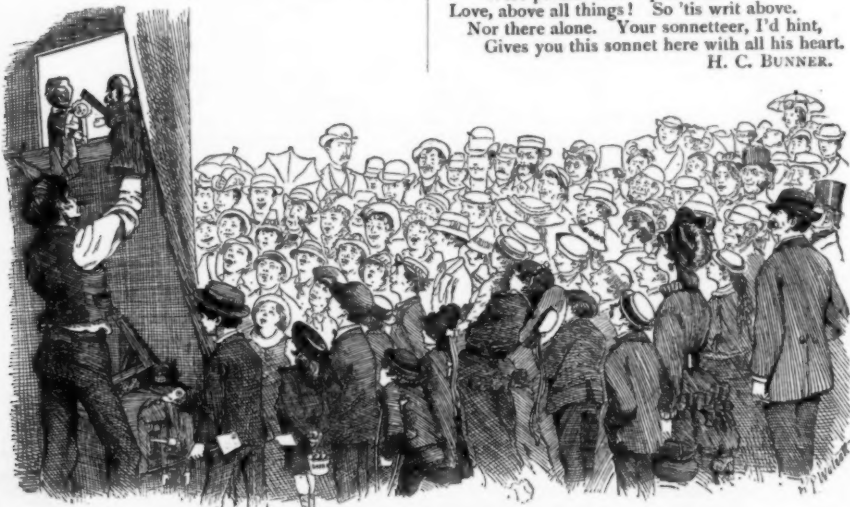
Metrical Gymnastics.

[THE self-constructed poem, wherein the writer, generally at the request of his sovereign lady, builds up an example of some special metrical form, taking for his subject a description of the feat itself, has always been a favorite *tour de force* of rhyme-sters, and has even been dignified by the performances of poets of note. The best-known examples are the *rondeau* of Voiture, imitated by Austin Dobson, and the sonnet of Lope de Vega, of which M. Henri Meilhac, the dramatist, has made a version in modern French after the famous example of Desmarais. The two best-known are printed below, with a very free English imitation.]

SONETO À VIOLANTE.

UN soneto me manda hacer Violante;
Que en me vida me he visto en tanto aprieto;
Catorce versos dicen que es soneto;
Burla burlando van los tres delante;
Yo pensé que no hallara consonante,
Y estoy a la mitad de otro cuarteto;
Mas si me veo en el primer terceto;
No hay cosa en los cuartetos que me espante
En el primer terceto voy entrando,
Y aun parece que entré con pié derecho,
Pues fin con este verso le voy dando;
Ya estoy en el segundo, y aun sospecho
Que voy los trece versos acabando;
Contad si son catorce: ya está hecho.

LOPE DE VEGA.



FUNCH AND JUDY AT ROCKAWAY BEACH.

UN SONNET.

UN SONNET, dites-vous; savez-vous bien, Madame,
Qu'il me faudra trouver trois rimes à sonnet?
Madame, heureusement, rime avec âme et flamme,
Et le premier quatrain me semble assez complet.

J'entame le second, le second je l'entame,
Et prends en l'entamant un air tout guilleret,
Car ne m'étant encor point servi du mot âme,
Je compte m'en servir, et m'en sers, en effet.

Vous m'accorderez bien, maintenant, j'imagine,
Qu'un sonnet sans amour ferait fort triste mine,
Qu'il aurait l'air boiteux, contrefait, mal tourné.

Il nous faut de l'amour, il nous en faut quand même;
J'écris donc en tremblant: je vous aime, ou je t'aime,
Et voilà, pour le coup, mon sonnet terminé.

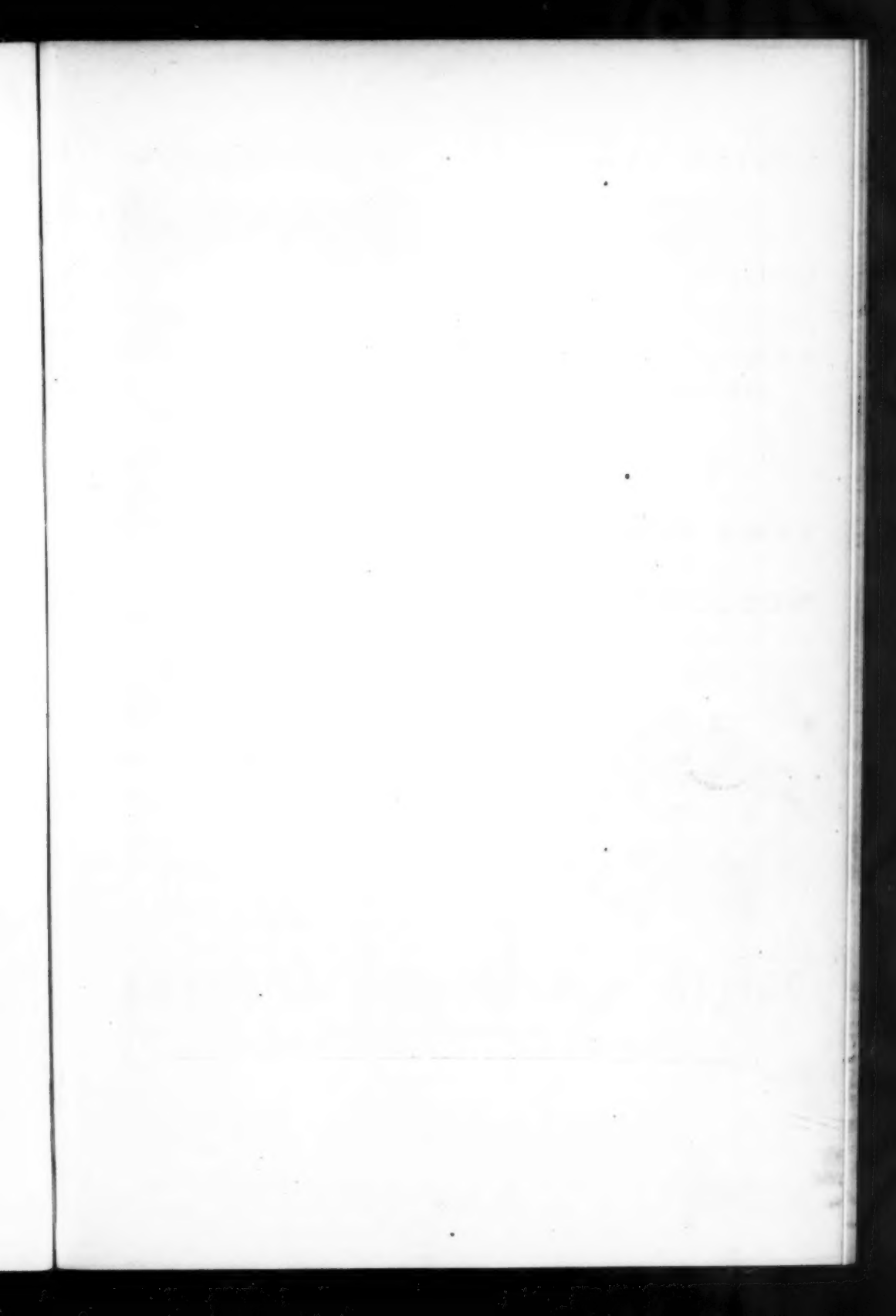
HENRI MEILHAC.

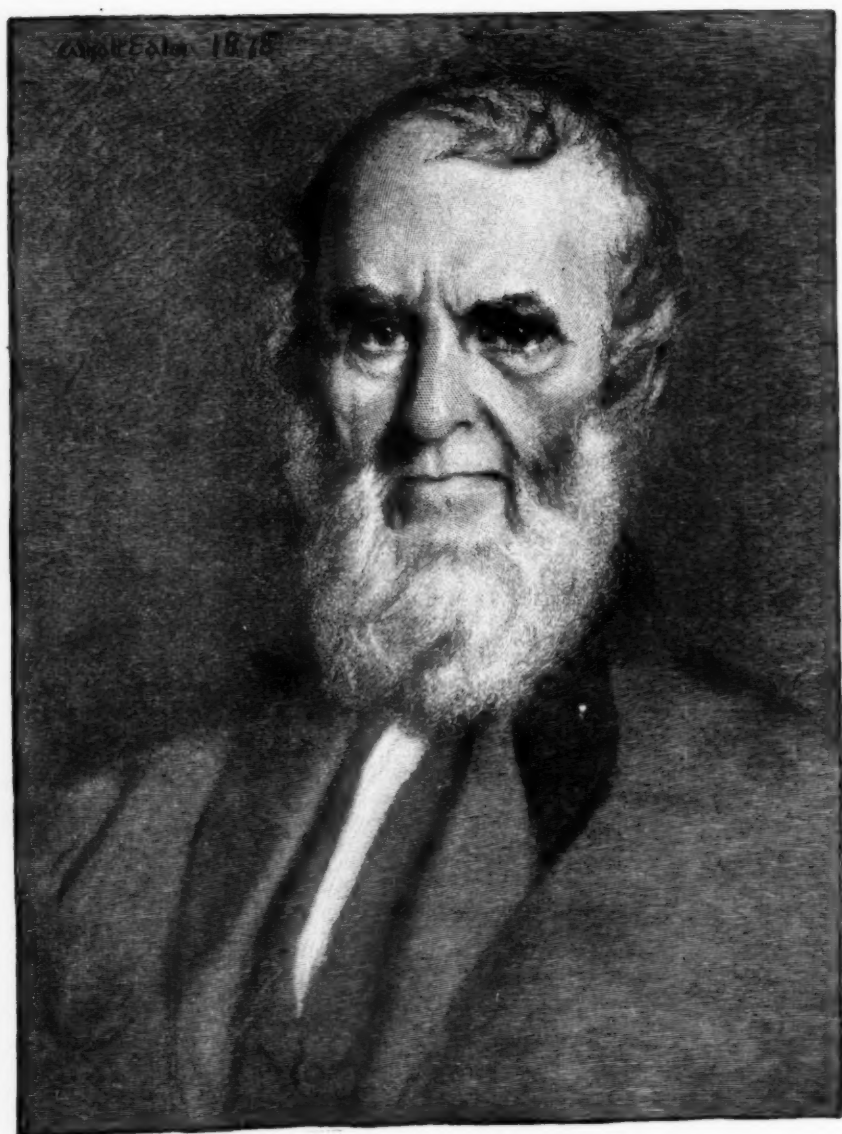
A SONNET TO ORDER.

A SONNET would you have? Know you, my pet,
For sonnets fourteen lines are necessary?
Ah, necessary rhymes, by luck, to fairy—
I'll call you one, and the first quatrain get.
This meets half-way the second; half-way met,
One meets an obstacle in a manner airy.
But here, though it is not your name, as Mary
I'll set you down, settling the second set.

Now, you'll admit, a sonnet without Love,
Without the savor of a woman in 't,
Were profanation of poetic art.
Love, above all things! So 'tis writ above.
Nor there alone. Your sonneteer, I'd hint,
Gives you this sonnet here with all his heart.

H. C. BUNNER.





Not by the page word-painted,
Let life be bann'd or sainted,
Deeper than written scroll
The colors of the soul.

Sweeter than any song
My songs that found no tongue,
Nobler than any fact
My wish that failed of act.

John G. Edhiller

Sixth Mo. 11. 1879.

